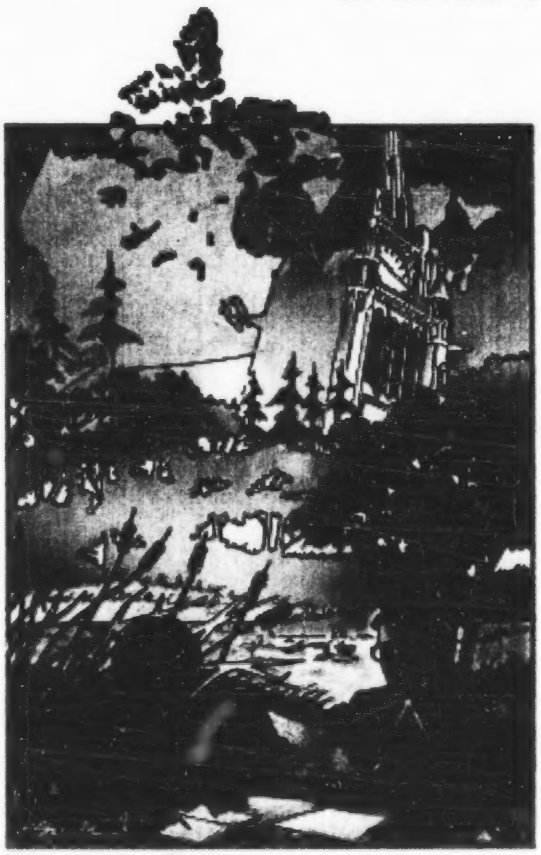
WETLANDS AND GOVERNMENT

POLICY AND LEGISLATION FOR WETLAND CONSERVATION IN CANADA



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by

Pauline Lynch-Stewart
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Clayton Rubec

wetlands

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North American Wetlands Conservation Council (Canada)

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Preface

This paper serves two principal objectives. First, it describes the policy and legislative framework for wetland conservation in Canada as of January, 1999. In so doing, it charts the substantial progress of Canadian governments in developing and implementing wetland policy since the Council's 1993 review *A Coming of Age: Policy for Wetland Conservation in Canada*. It also provides the first comprehensive summary of Canadian legislation for wetland conservation at the federal, provincial and territorial levels.

Second, this paper provides a benchmark for the development and exchange of ideas about objectives and strategies for maintaining wetlands as healthy, functioning elements of our landscapes. It is meant to provide model approaches for jurisdictions within and outside of Canada who are looking to construct their own frameworks for conservation. It also may help to kick-start more activity to adopt and implement strong policy and legal frameworks to ensure that wetlands continue to provide critical water, habitat and energy cycling functions so important to the health and well-being of Canadians.

Canadian experience in wetland conservation over the last few decades has taught us that the real driving force for conservation is not found in the pieces of paper that this report describes, but in the people who support it. It is people who challenge their governments to make the right decisions about wetlands under their purview. It is people who convince and enable industry, businesses or community groups to do what is in the best interest of conservation and ultimately in the best interest of creating a sustainable, healthy environment and economy.

Canada and its political jurisdictions have demonstrated leadership in the area of wetland policy and legislative development. So too have they been assertive in creating agencies and guidelines to evaluate and monitor potential or actual environmental damage to an area because of development on the landscape. Progress has been made, but wetland losses are still occurring. Now is not the time to rest, as more effort needs to be directed toward policy development and wetland conservation in general. This document provides guidance toward that end by pulling together the relevant policy and legislation across Canada, so Canadians can assess the strengths and weaknesses in existing policy and legislation.

So perhaps the most important value of this paper is to share with Canadians the details of the visions, promises and legal commitments of their governments regarding wetlands. This knowledge will help Canadians to hold governments accountable for their actions.

Kenneth W. Cox
Executive Secretary
North American Wetlands Conservation Council (Canada)

1.0 Executive Summary

Five Canadian governments have now delivered strong statements on how they intend to manage wetlands in their jurisdiction. The Governments of Canada, Alberta, Saskatchewan, Manitoba and Ontario have wetland policies in place. Three other provinces — Prince Edward Island, New Brunswick, Nova Scotia — are at various stages of developing or adopting wetland policies. The Governments of the Yukon Territory and Northwest Territories use the federal wetland policy to guide their decisions affecting wetlands on Crown lands. The Governments of British Columbia, Quebec and Newfoundland are pursuing wetland conservation using other measures.

Canadian wetland policies emphasize demonstrable leadership in the government handling of wetlands on Crown lands, and a voluntary approach to wetland stewardship on private lands, encouraged by public awareness and education programs, and incentives. The policies explicitly recognize landowner rights and the need for cooperation of industry, business, conservation organizations and the general public in protecting wetlands. Other common themes found in wetland policies include: a "sustainable development" approach for maintaining wetland functions in the long term, while recognizing the need for economic development; an "ecosystem" approach that provides for the dynamic nature of wetlands and their interrelationships with the surrounding environment; and a focus on maintaining wetland functions and values.

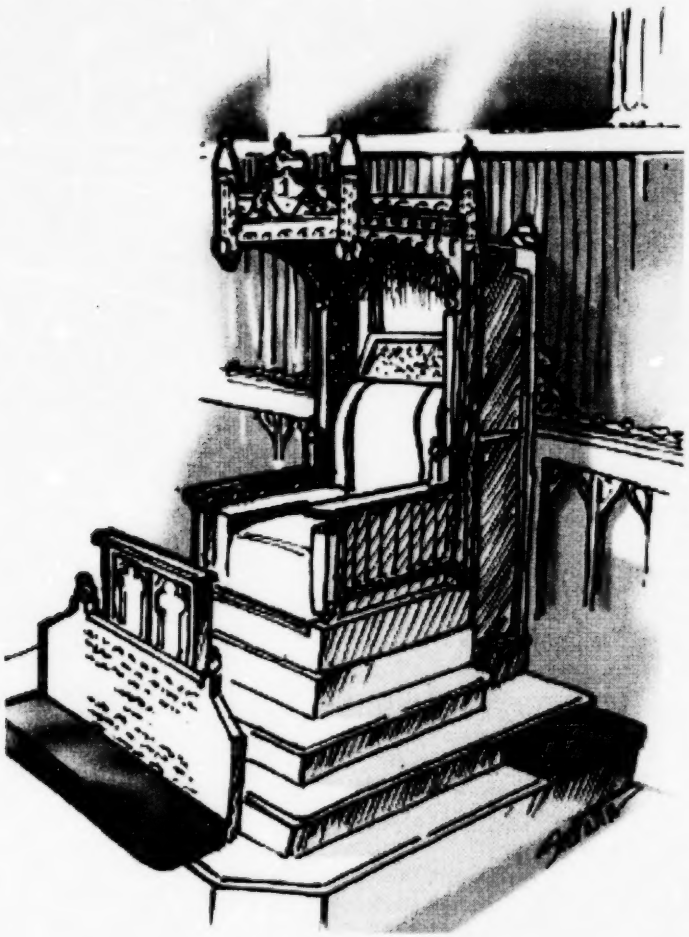
While emphasizing a voluntary, non-regulatory approach to wetland conservation, most policies acknowledge the need for regulations "where necessary" to protect the public interest. Canadian governments at all levels have a diverse suite of legal mechanisms available for conserving wetlands. This paper looks at over 30 federal and provincial or territorial statutes that influence wetland conservation across Canada. These statutes provide the authority for Crown agencies to: acquire wetlands for protection; regulate activities on private lands where they interfere with fisheries, migratory birds or water; require public project proponents to mitigate the impacts of their projects on wetlands; manage land use by applying by-laws, zoning and sensitive areas designations; provide tax incentives for conserving wetlands on private lands; and enter into conservation agreements with private landowners. Together, federal and provincial statutes provide a comprehensive set of tools to tackle the wetland issue.

Legislation is evolving in two important ways: more explicit reference to wetlands in a range of statutes, and more enabling powers for voluntary stewardship. At the provincial level, new and revised acts — and associated policies and guidelines — with broader environmental objectives are explicitly recognizing wetlands as important ecosystems worthy of special attention.

The last decade has also seen the establishment of a stronger legal foundation for stewardship activities in Canada. The federal government amended the *Income Tax Act of Canada* in 1996 to facilitate donation of ecologically sensitive lands, easements, covenants and servitudes to municipal, Crown and non-government environmental organizations. Provinces are also promoting voluntary, non-regulatory wetland conservation programs through conservation legislation that permits the establishment of stewardship programs,

conservation easements and conservation covenants.

While this paper describes many legal and policy tools for wetland conservation, it does not assess the effectiveness of these tools for achieving their purpose. Even on a regional or provincial basis, there is little information on how well we are doing *on the ground* and on the contribution of policy and legislation to this reality. To determine which policy and regulatory tools work and which do not, and to develop and implement more cost-effective mechanisms, conservation agencies must begin to monitor the effects of their existing complement of tools.



2.0 Introduction

Wetlands are among the most threatened of Canada's ecosystems. Numerous publications detail severe losses in Maritime tidal and salt marshes, the St. Lawrence River, in southern Ontario, the Prairie pothole region and the Fraser River Delta ecosystem (e.g. Alberta Water Resources Commission 1994; Environment Canada 1986; Government of Canada 1991; Lynch-Stewart 1983; Rubec *et al.* 1988; Saskatchewan Wetland Policy Working Group 1993; Snell 1987). Only recently have the profound implications of these losses become apparent, as wetland loss has been connected with, for example, increased flooding, poor water quality, desertification and declines of fish and wildlife.

How have Canadians responded to this problem? Over the past 15 years, we have become more serious about protecting wetlands from the impacts of development, and about restoring or replacing wetland functions where they have been lost or degraded. Individuals and conservation organizations have successfully lobbied Canadian governments at all levels to entrench their wetland commitments in policy and legislation. Two major industries have responded to consumer interest in sustainability with policy statements on how they will conserve wetlands. The public has also exerted a strong hand in shaping the wetland policies of five Canadian governments through informed and innovative representations at public meetings, workshops and in their response to discussion papers and questionnaires. And the same public continues to enforce commitments to wetlands, for example by holding government responsible for policy objectives, or ensuring that private developers comply with the ***Fisheries Act*** or other laws containing wetland provisions.

In partnership, government, business, industry and conservation organizations have made a consistent and determined effort to promote wetland conservation in Canada. A national workshop of non-government organizations met in 1987 to recommend a policy framework to be adopted and implemented by all governments in Canada (Federation of Ontario Naturalists and Environment Canada 1987). In 1988, the National Wetlands Working Group produced ***Wetlands of Canada***, a major source book on the variety, extent and status of wetlands, and their importance to our ecological and socio-economic systems (National Wetlands Working Group 1988). The 1990 Sustaining Wetlands Forum — opened by the Prime Minister calling for urgent action to conserve wetlands — submitted over 70 recommendations to the National Round Table on the Environment and the Economy (Sustaining Wetlands Forum 1990). As recommended by the Forum, the Canadian Wetlands Conservation Task Force was established in 1991: its final paper expanded on the recommendations of the Sustaining Wetlands Forum, documented related activities to date, and identified further opportunities for action (Cox 1993). National workshops have been held, to answer major questions concerning wetland inventory and monitoring (Lynch-Stewart and Rubec 1993), to discuss wetland policy implementation in Canada (Rubec 1994), and to explore the current thinking on wetland mitigation and compensation in Canada (Cox and Grose 1998).

This paper reviews how governments and others have responded to these many and varied calls for wetland conservation. The purpose of this paper is to describe Canada's policy and legislative frameworks for wetland conservation. Section 3.0 focuses on "The Policy Framework," looking at federal, provincial and industry sector policies on wetlands. Section 4.0 reviews "The Legislative Framework," summarizing federal, provincial and territorial jurisdiction and statutes concerning wetlands. Appendix A presents a range of wetland definitions, while Appendix B provides summaries of policies and statutes *by jurisdiction*. Tables in this paper summarize federal statutes for conserving wetlands (page 54) and provincial and territorial statutes that contribute to wetland conservation (page 56).

3.0 The Policy Framework

It is a common view that policy is an inferior government tool because it does not have the same "legal teeth" as do statutes. In fact, public policy can call into service a range of legal tools to tackle a particular issue. It can guide the development, revision and interpretation of legislation. Policy can establish goals and objectives to work towards, and justify the resources that are required to make progress on issues. Policy calls attention to issues, and can promote awareness and understanding of issues among Canadians.

To date, Canada's federal government and four provinces — Alberta, Saskatchewan, Manitoba and Ontario — have wetland policies in place. The federal wetland policy guides the governments of the Yukon and Northwest Territories in their decisions affecting wetlands on Crown lands. Three other provinces — Prince Edward Island, New Brunswick and Nova Scotia — are considering wetland policies.

Traditionally, governments have operated in a "lead and control mode" for conservation: establishing regulations, allocating funding and providing on-the-ground program delivery (Silver *et al.* 1995). But Canadian wetland policies reflect a major shift in the approach to conservation, spurred on by restricted public finances, continuing degradation of resources and loss of biodiversity, and a growing acknowledgement of the role of all Canadians as partners in environmental conservation. Canadian wetland policies emphasize:

- Voluntary stewardship of private lands, encouraged by education and incentives; intergovernmental cooperation,
- Conservation partnerships involving government, industry, business, conservation organizations, landowners, and individuals,
- Exemplary wetland management on Crown lands,
- Regulation only "where necessary" to protect the needs of the general public, or focusing on enabling voluntary conservation,
- The need for regional frameworks for the design and implementation of wetland conservation strategies, and basin or watershed approaches to wetland management,
- The use of a range of mechanisms for achieving wetland objectives, including integrated planning processes and environmental assessment, and
- The need for continuing research and science programs, including inventorying and monitoring.

Canadian wetland policies or their implementation guidelines often include a "triage" approach to wetlands, involving outright protection for some wetlands; allowing some activities and development to proceed on other wetlands within limits and providing that impacts are mitigated; and restoration and rehabilitation of previously degraded sites, or creation of new wetlands in areas of severe loss.

Wetlands in Canada's ten provinces are generally under provincial authority except on federal lands such as national parks. However, in its two northern territories, most wetlands remain under federal management. Hence, while the federal authority applies directly to 29% of Canada's wetland base (on federal lands), provincial wetland programs are responsible for the rest. Section 4.0 details the legal jurisdiction over wetlands, and Appendix B presents a summary of policies and statutes for wetland conservation *by jurisdiction*.

3.1 Federal Wetland Policy

One of the original considerations in the development of the federal wetland policy was to deliver Canada's commitment to the wise use of wetlands through membership in the *Convention on Wetlands*, which the Government of Canada signed in 1981.[1] It was also apparent that greater influence on land use decisions by federal departments and agencies would assist in meeting Canada's commitments under the

[1] The *Convention on Wetlands of International Importance (1971)* was the first global, inter-governmental conservation treaty dealing with one specific type of ecosystem, aiming to stem the loss of wetlands and ensure their sustainable use.

North American Waterfowl Management Plan. More recently, following Canada's endorsement of the *Convention on Biodiversity* in 1992, it was expected that the federal wetland policy would form a portion of implementation initiatives for this important and far-reaching international agreement. Canada, in particular, has been supportive of joint actions for freshwater by the *Convention on Biodiversity* and the *Convention on Wetlands*.

The *Federal Policy on Wetland Conservation* (Government of Canada 1991) was approved by Cabinet in December 1991. The *Policy* is a shared federal responsibility: it directs all departments to sustain wetland functions in the delivery of their programs. It applies to the full range of federal activities, in much the same way that the *Canadian Environmental Assessment Act* is triggered. The Canadian Wildlife Service of Environment Canada provides information on the general interpretation of the *Policy*. Environment Canada's Environmental Conservation Branch regional offices provide advice on the interpretation of the *Policy* and on projects involving wetlands or information on specific wetland sites. The *Policy* has been successful in raising the profile of wetlands in federal decision-making, as evidenced by numerous documented case studies of the decisions that it has influenced (Rubec pers. comm.).

The objective of the *Federal Policy on Wetland Conservation* is: *"to promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions, now and in the future."* Two key commitments include: (a) no net loss of wetland functions on federal lands and waters through mitigation of all impacts of development related to these wetlands; and (b) enhancement and rehabilitation of wetlands in areas where the continuing loss or degradation of wetlands has reached critical levels.

Implementation of seven strategies under the *Policy* is now facilitated by the *Implementation Guide for Federal Land Managers* (Lynch-Stewart *et al.* 1996). The *Guide* contains advice on integrating wetland considerations in advance planning initiatives, and provides details regarding when and how wetland objectives can be met through the environmental assessment process under the *Canadian Environmental Assessment Act*. The *Guide* also outlines a hierarchical sequence of mitigation alternatives for achieving the "no net loss" goal, that includes avoidance as a priority, minimization of adverse effects when they cannot be avoided, and, as a last resort, compensation for the replacement of unavoidably lost wetland functions. The *Guide* defines the wetland mitigation alternatives and describes the situation within which each option should be applied, based on factors such as relative importance of wetland functions, wetland losses in the region or watershed, and the nature of the project and available alternatives.

Implementation of the *Policy* is haunted by two major misconceptions. First, many land managers have indicated that they regard it as a policy of the federal environment department. Rather, it is a Cabinet-approved federal policy, and all federal departments are responsible for implementing and financing its seven strategies. The second major misconception is that it applies only to the management of federal lands. In fact, the *Policy* applies to the delivery of all federal programs, services and expenditures. A training program on implementing the federal wetland policy has been developed by the North American Wetlands Conservation Council (Canada) and the Canadian Wildlife Service to help federal land managers to better understand and carry out their obligations with respect to wetlands (NAWCC (Canada) and Environment Canada, Canadian Wildlife Service 1998).

3.2 Provincial Policies

To date, four provinces — Alberta, Saskatchewan, Manitoba and Ontario — have wetland policies in place. In the Yukon and Northwest Territories, the

Federal Policy on Wetland Conservation guides territorial government decisions affecting wetlands on Crown lands. The Government of New Brunswick has approved in principle a wetland policy, and a land use policy for coastal lands is anticipated to be in effect early in 1999. Nova Scotia has a wetlands directive under the *Environment Act*, and a draft policy dealing with alteration of wetlands is pending ministerial approval. Prince Edward Island has wetland alteration guidelines available to the public, and is currently drafting a policy for small wetlands in that province. The provinces of British Columbia, Quebec and Newfoundland do not have wetland policies but use existing legislation to conserve wetlands, focused on wildlife habitat, water or resource harvesting. The Ministry of Environment, Lands and Parks of the Government of British Columbia has a wetland working group that plans to develop a strategic framework for ministry discussion of wetland conservation and management.

A number of themes are prevalent among Canada's provincial policies that pertain to wetlands:

1. Sustainable management of wetlands, that focuses on: a) outright protection for some wetlands, b) allowing some activities and development to proceed on other wetlands within limits and providing that impacts are mitigated, and c) restoration and rehabilitation of previously degraded sites;
2. An ecosystem approach, referring to the dynamic nature of wetlands and their interrelationships with the surrounding environment; focusing on the conservation of wetland functions and values;
3. Demonstrable leadership with strong statements concerning how wetlands are to be managed on Crown lands;
4. Rights of private landowners to manage their lands;
5. Interests of aboriginal people;
6. Voluntary participation by landowners in conserving wetlands, often using incentives;
7. Legislation or regulation only "where necessary" to protect the needs of the general public; and
8. Use of a range of mechanisms to achieve wetland objectives, including government agency programs and decisions, local and regional planning processes, partnerships and agreements with the public, education and awareness programs and public consultation.

The Government of Alberta is guided by *Wetland Management in the Settled Area of Alberta: An Interim Policy* (Government of Alberta 1993), that provides direction for the management of slough/marsh wetlands in the southern portion of the province. The Government has drafted a *Recommended Wetland Policy for Alberta* (Alberta Water Resources Commission 1994) that provides direction for wetland management throughout Alberta. The role of the draft *Recommended Policy* is to provide consistent direction for provincial departments and agencies to consider wetland functions and values in their policies, programs and activities. If the policy is adopted, its implementation will be led by Alberta Environmental Protection and guided by an interdepartmental committee.

Alberta's *Recommended Policy* contains objectives for each of the two main wetland types in the province: slough/marsh wetlands and peatlands. The slough/marsh objectives priorize the conservation of these wetlands in a natural state, allow for mitigation where this is not possible, and urge the enhancement, restoration or creation of wetlands in areas where loss or degradation of wetland is significant. The peatland objectives are to designate provincially, regionally or locally significant wetlands, to allow activities and development on peatlands within acceptable limits, and to mitigate the effects of peatland development on the surrounding land and water. Six strategies detail specific actions that will be taken by the government to meet the policy objectives. Some interesting actions include:

- the identification, on a regional basis, of limits for peatland development,
- public communication of the fact that the water in wetlands is a provincial resource, and

- an intention that the Crown will retain ownership of slough/marsh wetlands even if the surrounding land is transferred to private ownership.

The *Saskatchewan Wetland Policy Statement* (Government of Saskatchewan 1995) promotes the sustainable management of wetlands to maintain the "numbers, diversity and productive capacity of wetlands." The *Policy* will be implemented by provincial government departments and agencies, and led by the Saskatchewan Wetland Conservation Corporation. The *Policy* objectives focus on the sustainable management of wetlands on public and private lands to maintain their functions and benefits, the conservation of wetlands essential to maintain critical wetland species or functions, and the restoration or rehabilitation of degraded wetland ecosystems. *Your Guide to Saskatchewan Wetland Policy* (1995) includes "next steps" regarding public awareness, wetland monitoring, land-use planning guidelines and landowner encouragement.

Unique to the *Saskatchewan Wetland Policy* is the definition of wetlands which includes "both the wet basin and an area of transitional lands between the waterbodies and adjacent upland...The transitional lands are a minimum of 10 metres (33 feet) adjacent to the area covered by water at the waterbody's normal full supply level." Further, "low lying areas predominantly under cultivation are not considered wetlands, as they have been converted to other uses."

In Manitoba, wetland policy objectives are contained in the *Manitoba Water Policies* (Government of Manitoba 1990). One of the seven policy objectives makes explicit reference to the conservation of wetlands. Policy statements under this objective call for:

- conservation of wetland values,
- retention of wetlands "primarily by the provision of incentives," but with "regulation where required," and
- "special consideration" for waterways with values of provincial or national significance.

As is the case in Alberta and Saskatchewan, application of the *Manitoba Water Policies* is the responsibility of government agencies, while the need for public cooperation in wetland conservation is acknowledged. However, the *Manitoba Water Policies* go one step further. An "Application" section for each of the policy statements identifies specific activities that *will* be carried out by the provincial government and suggested activities that *can* be carried out by local governments, conservation districts, landowners, industry, business, conservation groups and the general public.

Ontario's wetland policy statement is now part of the *Provincial Policy Statement* (Ontario Ministry of Municipal Affairs and Housing 1997) issued under the authority of the provincial *Planning Act*. That *Act* requires that planning authorities "shall have regard to" these policy statements in making decisions on all land-use applications. The *Natural Heritage Policies* of the *Provincial Policy Statement* explicitly provide for the protection of seven different natural heritage features and areas: significant wetlands; significant portions of the habitat of endangered and threatened species; significant woodlands; significant valleylands; significant wildlife habitat; significant Areas of Natural and Scientific Interest; and fish habitat.

The *Natural Heritage Policies* are aimed at protecting Ontario's natural heritage from incompatible development. The *Policy Statement* distinguishes between the land-use planning approach that shall be taken to wetlands in the Canadian Shield, from that of wetlands to the south and east of the Canadian Shield. South and east of the Shield, where wetland losses have been most severe, development and site alteration is prohibited in provincially significant wetlands. In the Shield, development and site alteration is permitted in provincially significant wetlands "if it has been demonstrated that there will be no negative impacts on the natural features or the ecological functions for which the area is identified."

An important component of the Ontario's *Natural Heritage Policies* is the adjacent lands provision. Development may be permitted on adjacent lands if it has been demonstrated that there will be no negative impacts on the natural features or ecological functions for which a wetland is identified. The *Natural Heritage Policies* also encourage the maintenance and improvement of natural connections or linkages between discrete natural heritage features and areas.

Generally, the effectiveness of these relatively new wetland policies is not known. The Manitoba Habitat Heritage Corporation commented that "Manitoba is still some ways away from a 'no net loss' state for wetlands," due to a general lack of enforcement of current policy and legislation; however, efforts to enforce the *Manitoba Water Rights Act* have recently increased and early results are encouraging (Colpitts pers. comm.). Ontario Ministry of Natural Resources officials point out that one clear limitation of Ontario's *Provincial Policy Statement* is that it does not recognize peat extraction as a development activity. Peat harvesting, common in some parts of Ontario, does not "trigger" the wetland policy, since it is not considered to be "development" (Potter, pers. comm.). Some planning has been done to identify performance indicators measuring the effectiveness of Ontario's *Provincial Policy Statement*, as provided for in the *Policy* itself (Potter pers. comm.).

3.3 Industry Sector Policies

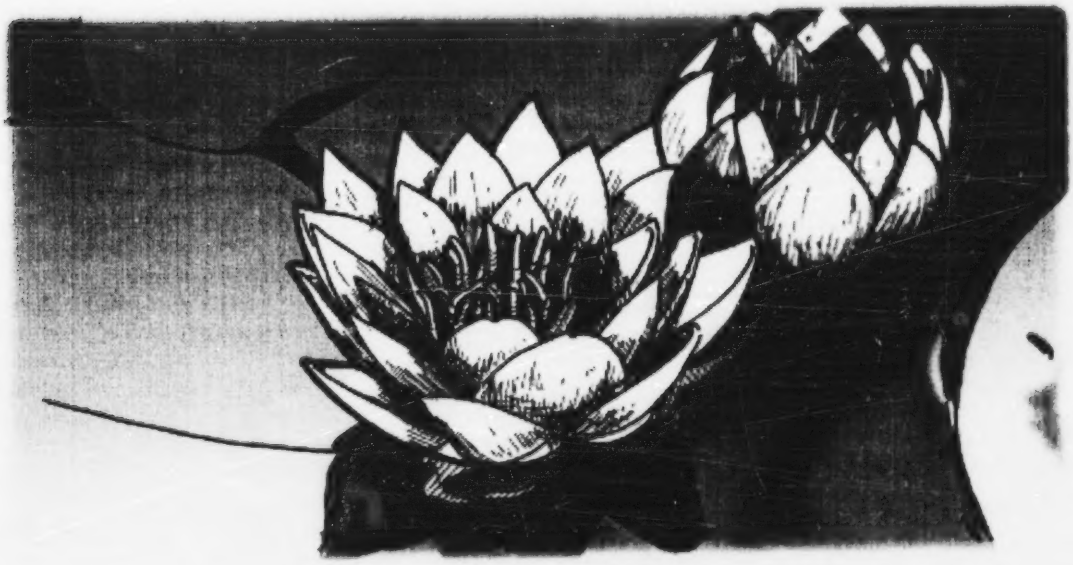
While environmental and biodiversity policies are common among industry associations, few policies focus on wetland management. A recent review of major industry associations (Kerr-Upal 1998) — including those representing agriculture, forestry, mining, petroleum production, pulp and paper manufacturing, and energy pipeline development — revealed that wetland conservation is not an explicit priority among these groups. However, two industry associations have specific wetland policies and two others have developed memoranda of understanding with the North American Wetlands Conservation Council (Canada).

The Canadian Sphagnum Peat Moss Association has adopted a *Preservation and Reclamation Policy* (Canadian Sphagnum Peat Moss Association 1991). The policy identifies the industry's commitment to work with conservation groups and government agencies to enhance public awareness of peatland resources. The policy also details guidelines for peat production and site reclamation. The Association has established a *Peatland Restoration Guide* (Quinty and Rochefort 1993) that focuses on peatland reclamation and restoration after harvesting.

The Canadian Pulp and Paper Association (CPPA) has released a *Wetlands Policy Statement* (Canadian Pulp and Paper Association 1992), which lays out a series of sustainable development commitments on the use of wetland ecosystems by one of the nation's largest employers. The CPPA *Statement* notes the pulp and paper industry's commitment to sustaining wetlands through integrated resource management and to maintenance of the ecological and socio-economic functions of wetlands over the long term. The *Statement* notes also that CPPA companies support a coordinated, cooperative approach involving all stakeholders.

Memoranda of Understanding (MOUs) have recently been signed between the North American Wetlands Conservation Council (Canada), Ducks Unlimited Canada and two national agriculture organizations: the Canadian Federation of Agriculture and the Canadian Cattlemen's Association. The MOUs recognize the agencies' long-standing partnerships to work together to improve the ecological health and productivity of the agricultural landscape, and to work toward long-term sustainability. Specifically, the MOUs outline the agencies' agreement to explore mutually advantageous policies and programs related to the

environment and trade, to develop practical sustainability indicators for rural landscapes and to develop and promote voluntary and incentive-based approaches to sustainable land use and habitat conservation.



4.0 The Legislative Framework

This section identifies legal tools that can contribute to wetland protection in Canada. It focuses on federal, provincial and territorial legislation — that is, statutes or acts passed by legislatures — that have been used to conserve wetlands, or have the potential to do so.[2]

There is no comprehensive statute in any jurisdiction in Canada that focuses exclusively on conserving wetlands, although some statutes define special provisions for wetlands within a broader mandate. Most acts reviewed here are not wetland statutes *per se;* rather they offer support for wetland protection while advancing other statutory objectives.

Canada's legal framework comprises two main types of legislation for wetland conservation. The more "traditional" statutes aim to manage or control human activity for particular purposes, requiring compliance with specific regulations, and specifying punishment for contravention. For example, some statutes provide the authority to acquire or designate lands as "protected areas"; to develop regulations for what can and cannot be done in designated areas; or define acceptable effects on certain species of wildlife and their habitat. Other statutes regulate the use of resources such as water and the impact on the environment of activities such as forestry. Other statutes set out how processes, such as environmental assessment or land-use planning, must be carried out, and specify how the public will be able to participate in those processes.

However, with growing awareness that stewardship of private lands is the key to environmental conservation in Canada, an entirely new breed of statutes has emerged over the last 15 years that *enables* voluntary stewardship practices. For example, statutes have been enacted that provide legal frameworks for landowner conservation agreements, or tax incentives for the donation of ecologically sensitive land.

Even old statutes are being used in new and progressive ways. One example is the establishment of the North American Wetlands Conservation Council (Canada) under the *Canada Wildlife Act*, which supports cooperative, multi-partner projects that are making a difference to wetlands on the ground. At the provincial level, a number of the statutes that have been "on the books" for some time are now being applied to wetland conservation; and many new revisions are incorporating explicit reference to the need to protect wetland ecosystems.

Federal, provincial, territorial and municipal governments in Canada have the authority to make and enforce laws that affect wetlands. However, the authority over wetlands lies mainly with the provinces, by virtue of their ownership of the natural resources that lie within their boundaries, and their jurisdiction over civil rights; an authority limited only by the existence of federal areas of responsibility (Percy 1993). Thus, the majority of statutes that can influence wetlands in Canada have been enacted at the provincial level.

4.1 Federal Jurisdiction and Statutes

Federal authority lies in its responsibilities for maintaining the quality of the environment, migratory bird populations, inland and ocean fisheries, and international or transboundary resources such as water and wildlife, as well as direct management responsibility for federal land holdings across the nation. Attridge (1996) notes:

> *"The federal government also has a leadership and unifying role to play, both within Canada's boundaries and beyond. This role derives from federal involvement and obligations within the international area, its unique position in relation to the provinces, plus its extensive resources, experience and influence available to be applied as opportunities arise across the country."*

[2] Consideration of the common and civil law cases related to wetlands is beyond the scope of this paper. For a review of those cases related to biodiversity, see Attridge (1996).

Seven federal statutes contribute to wetland conservation in Canada:

- *Migratory Birds Convention Act*
- *Canada Wildlife Act*
- *National Parks Act*
- *Canada Oceans Act*
- *Fisheries Act*
- *Canadian Environmental Assessment Act*
- *Income Tax Act of Canada*

Table 1 in Appendix B summarizes the results of this study of federal statutes, and shows that federal legislation can protect wetlands that:

- provide "nationally significant" habitat, especially for migratory birds;
- support fish stocks that sustain commercial, recreation or native fishing activities;
- are threatened by projects for which the federal government holds decision-making authority; and
- are contained within the boundaries of national parks.

Four of the seven statutes rely on the designation and management of protected areas as the primary means of achieving their objectives. Two statutes prohibit activities anywhere in Canada that will harm habitat, including wetlands. One statute focuses on a particular major developer in Canada — the federal government — holding federal agencies accountable for mitigating the environmental effects of a broad range of their projects. Another statute fosters use of voluntary land donations and conservation easements in return for tax deductions against income. A few of the statutes also contain provisions for cooperating with provincial governments or establishing advisory bodies.

Although they fall short of providing comprehensive protection for wetlands on a national scale, these seven federal statutes contain substantial authority for wetland conservation for those areas where the federal government has constitutional jurisdiction. But what have they achieved? The effectiveness of the *Migratory Birds Convention Act* or the *Fisheries Act* in preventing harm to wetland habitat is difficult to gauge, and there is no national accounting of charges laid, specific to wetlands, under these Acts. Nor has there been any research accomplished on the wetland area protected by the *Canadian Environmental Assessment Act*. However, the following points exemplify the influence that these statutes can exert over wetlands:

- By 1993, over 7.1 million hectares of wetlands were protected by the Government of Canada in its network of 180 National Wildlife Areas, National Parks and Migratory Bird Sanctuaries (Bryson and Associates 1993). Four Migratory Bird Sanctuaries and ten of Canada's National Wildlife Areas are designated as Wetlands of International Importance under the *Convention on Wetlands*.

- Under the *Canada Wildlife Act*, the North American Wetlands Conservation Council (Canada) was created in 1990. The Council co-ordinates the implementation of the North American Waterfowl Management Plan in Canada, and promotes wetland conservation through co-ordinating management, science and policy initiatives. It is supported by a national secretariat in Ottawa and has published over 20 reports that focus on making Canadians more aware of the importance of wetlands and wetland conservation.

- Estrin and Swaigen (1993) cite numerous wetland development projects in Ontario that have been scrutinized under the *Fisheries Act*. For example, an Ontario developer was recently charged after a portion of provincially significant wetland was filled, dredged and bulldozed without any statutory approval.

- Under the *Canadian Environmental Assessment Act*, and with reference to the *Federal Policy on Wetland Conservation*, an independent panel review of the environmental screening of a federal museum facility directed the government to consider restoring former wetlands or constructing new wetlands on federal lands as near the site as possible on a replacement ratio of at least 2:1. The Panel wrote that

there needs to be a public commitment on the part of the federal government to undertake the necessary compensation. The Museum is committed to ensuring the long-term conservation of wetlands adjacent to the facility, and their use in scientific research, public awareness and education.

- Rubec (1998) reports that during the first two years of the Ecological Gifts Program under the *Income Tax Act of Canada* and the *Loi de l'impôt sur le revenu du Québec*, 90 ecological gifts by private landowners, representing over 10 200 hectares of sensitive habitats valued at $25 million, have been donated to conservation organizations.

Have these statutes and their regulations been effective in protecting wetlands as nationally significant habitat, especially for migratory birds, as habitat that sustains fisheries, as an ecosystem within a park landscape, or from impacts caused by federal projects? Comprehensive studies have not been accomplished to answer this question. However, published comments suggest that while statutes may authorize substantial powers, their potential for wetland protection is largely "unfulfilled" to date. For example,

- Percy (1993) notes that the *Canada Wildlife Act* remains a limited instrument for wetland conservation in the Prairie Provinces. He notes "The intimate connection between wetlands and wildlife habitat might suggest that the *(Canada) Wildlife Act* would be an important source of wetland regulation. However, the Act ... provides little direct power over wetlands because of the jurisdictional limitations placed on the federal government."

- Attridge (1996) comments on the advantages of National Wildlife Area and Migratory Bird Sanctuary designations for biodiversity conservation, but suggests that both designations could be more widely used, given their potential to act as buffer areas around, or links between, protected areas such as national or provincial parks.

- The World Wildlife Fund Endangered Spaces Campaign has called for an increase in protection standards for National Wildlife Areas and Migratory Bird Sanctuaries, urging the federal government to eliminate the potential for industrial development in all National Wildlife Areas, by adopting management standards equivalent to those set for the Polar Bear Pass National Wildlife Area when it was established (World Wildlife Fund Canada 1996; World Wildlife Fund Canada 1998).

- The *Fisheries Act* only applies to wetland habitats that can be shown to contribute to an existing or a potential fishery. Percy (1993) also notes that in the Prairie Provinces, it seems unlikely that a federal Act would be enforced in areas, such as wetlands, that have previously been considered as totally within provincial jurisdiction.

- Attridge (1996) concludes that the *Canadian Environmental Assessment Act* does not accomplish comprehensive, independent review and decision-making to avoid or mitigate impacts on the biodiversity of ecosystems such as wetlands. In particular, the lack of clear criteria for determining appropriate mitigation measures is an important weakness that needs to be addressed to fully inform federal decisions about wetlands.[3]

4.2 Provincial and Territorial Jurisdiction and Statutes

Attridge (1996) describes provincial and territorial jurisdiction relative to biodiversity:

> *"Provincial governments have exclusive control over natural resources, public lands belonging to the province and the timber and wood located on these lands, municipalities and any other merely local and private matters, and broad property and civil rights. The provinces share jurisdiction with the federal government over some areas, such as agriculture, and*

[3] Drawing from the substantial body of growing expertise on this subject in Canada and the United States, the North American Wetlands Conservation Council (Canada) has prepared a report entitled *Wetland Mitigation and Compensation: Proceedings of a National Workshop* (Cox and Grose 1998). It is also considering development of principles and guidelines and a practical framework for applying wetland mitigation and compensation in Canada. Together, these further studies could provide detailed advice on when, where and how to mitigate impacts to wetlands.

also may impose taxes of various sorts. In aggregate, this jurisdiction gives the provinces the primary lead in conserving wildlife and habitat, and in managing how biodiversity is used.

"Territorial governments are established on the basis of delegated powers from the federal government; they thus do not have their own independent constitutional mandate, as do the federal and provincial governments. Municipal governments also have this derivative authority, conducting their affairs within the limits prescribed by the provinces. While both territorial and municipal governments are established and operate at the discretion of their parent governments, they nonetheless are well-entrenched institutions and exercise substantial powers and political influence."

Provincial and territorial constitutional powers have resulted in the enactment of a range of statutes in each province and territory related to land-use planning, protected areas designation and wildlife management. No jurisdiction has an exclusive wetland protection statute. Each provincial and territorial jurisdiction uses a mix of legal tools to accomplish wetland conservation objectives, including legislation pertaining to protected areas, wildlife management, water management, land-use planning, environmental protection, environmental assessment, sustainable use of resources, and private land conservation. Table 2 in Appendix B highlights some 25 provincial and territorial statutes that are considered by local wetland managers to be the most valuable legal tools for wetland conservation. These are discussed below.

Protected Areas

All of Canada's ten provinces have legislation that enables the designation of protected areas such as provincial parks, ecological reserves, wilderness areas, and fish and wildlife sanctuaries. This type of legislation can secure the legal protection of a wetland; however, protection of wetlands under these statutes is mostly incidental to date. That is, although such a designation might preserve wetlands within its boundaries, the area may not have been designated for that primary purpose. It is estimated that an area matching the federal protected wetland area described in Bryson and Associates (1993) — about eight million hectares of wetlands — may be present on provincially and territorially protected parks and sanctuaries across Canada. The *Prince Edward Island Natural Areas Protection Act* is one provincial statute that specifically targets wetlands for protection.

Land claim agreements within the Yukon and Northwest Territories have been an important tool for the designation of protected areas. Virtually all land claim agreements require that certain lands be designated as either national or territorial parks, special management areas, ecological reserves or habitat protection areas (Attridge 1996). Four wetland areas in the Yukon now have protected status, all as a result of land claim settlements since 1984 (Yukon Department of Renewable Resources and Environment Canada 1996).

Wildlife Management

Wildlife legislation generally deals with either the consumptive use of wildlife, such as hunting and fishing, or the protec-

tion of endangered species. Provincial wildlife statutes that include habitat protection clauses can generally be applied to protecting wetlands.

Regulations under the *Newfoundland Wildlife Act* provide for the creation of wildlife reserves to provide habitat for particular species, and for the creation of no hunting areas which virtually create a protected area. Saskatchewan's *Wildlife Habitat Protection Act* has been used to protect wetlands that provide habitat for endangered species. The *Quebec Act Respecting the Conservation and Development of Wildlife* protects wetlands that are waterfowl gathering areas and provide fish and muskrat habitats. Prince Edward Island is in the process of passing the *Wildlife Conservation Act*, which is anticipated to be a powerful tool for wetland protection because it will recognize heritage marshes as areas to be protected.

Water Resources

Water resource legislation regulates the use of freshwater within a province through licences and permits. These statutes often contain clauses protecting water in its natural state and can therefore be used to protect the hydrology that sustains wetlands.

In British Columbia, the *Water Act* protects wetlands if there is an application made to withdraw water from a wetland, or carry on activities in and around streams that may be part of a wetland system. The *Water Resources Act of Alberta* has been used to issue licences to protect water in its natural state for the purpose of conservation, recreation or the propagation of fish or wildlife. Alberta's new *Water Act* recognizes the importance of wetlands in maintaining water quality by requiring a strategy for protecting aquatic environments. Under *The Water Corporation Act* of Saskatchewan, landowners are required to obtain approval to construct ditches or other works that cause water to leave their land. The *Ontario Water Resources Act* has been used to protect the hydrological values of wetlands. In New Brunswick, the Water Course Alteration Regulation of the *Clean Water Act* provides a specific regulatory mechanism for controlling wetland loss within watersheds used to supply drinking water.

Land-use Planning

Municipal and community planning acts control land use and development in the urbanized regions of the provinces and territories. They play a significant role in wetland protection because it is at this jurisdictional level that many decisions regarding wetlands in and around urban areas are made. Municipal planning, zoning, park and land acquisition, by-laws and environmentally sensitive areas statutes can all have a major impact on wetland protection in urbanized areas.

Recent reforms to the *Ontario Planning Act* have given greater control over land-use planning to that province's municipalities. The new Ontario *Provincial Policy Statement* (Ontario Ministry of Municipal Affairs and Housing 1997) identifies the need to protect provincially significant wetlands from incompatible development. Provincially significant wetlands have been identified using the *Ontario Wetland Evaluation System* (Ontario Ministry of Natural Resources 1993a; 1993b). The interpretation and implementation of the *Policy Statement* as a tool for wetland protection has not yet been determined.

In Manitoba, some rural municipal councils have become so frustrated with the drainage of wetlands on private land into municipal drains and road ditches, that they have passed by-laws under the *Municipal Act* to discourage such practices (Colpitts pers. comm.).

In Newfoundland, the *Municipalities Act*, together with the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan, has been used to develop a successful stewardship program which has protected many hectares of wetlands. Under this program the Newfoundland Department of Natural Resources assists municipalities in identifying wetlands that require protection and in developing a management plan for the wetland site.

All the provinces have a Crown or public lands act that regulates the use and development of Crown land. In Ontario, the *Public Lands Act* prohibits the clearing or filling of public lands or the dredging or filling of "shorelands" without approval. In addition the *Act* empowers the courts to order the rehabilitation of shorelands or public lands. The Alberta *Public Lands Act* has been effective in protecting wetlands by regulating the use of public lands.

Environmental Protection

All provinces have some form of environmental protection legislation that is the central anti-pollution law of the province. Each has the potential to protect wetlands by prohibiting discharge of harmful contaminants. This represents another legislative tool that can be used for wetland protection, but it does not appear to be applied very often.

Prince Edward Island's *Environmental Protection Act* is a very effective tool for the conservation of wetlands. A Watercourse Alteration Committee reviews all applications for alterations of watercourses, including wetlands, under the Act's *P.E.I. Watercourse and Wetland Alteration Guidelines* (1995). Permit applications have risen from 60 in 1993 to over 600 in 1998, largely because of better awareness and effective enforcement.

Environmental Assessment

Provinces across Canada have environmental assessment legislation that can potentially be used for the protection of specific wetlands. These acts establish a legal process for assessing the environmental impacts of a public undertaking.

The Environmental Impact Assessment Regulation of the *Clean Environment Act* of New Brunswick provides a specific regulatory mechanism for controlling wetland loss. The Nova Scotia *Environment Act* mandates the Department of Environment to manage water in wetlands greater in area than two hectares. Requests to alter or infill wetlands less than two hectares are evaluated under a process associated with Nova Scotia's *Wetlands Directive* (Nova Scotia Department of Environment 1995). The Newfoundland *Water Resources Policy* under the *Environment Act* includes the protection of wetlands as a hydrologic resource.

Sustainable Use of Resources

All provinces have legislation that regulates renewable resource harvesting practices. Forest harvesting can have a significant impact on wetlands. Requirements for adequate buffers around wetlands and streams can reduce these impacts thus protecting wetland values.

The *Forest Practices Code of B.C. Act* includes wetland and riparian setbacks as well as limitations on logging for different classes of wetlands. The *Act* establishes "Riparian Management Areas," which include both a reserve zone and a management zone (Southam and Curran 1996). The *Crown Forest Sustainability Act of Ontario*, anticipated in 1998, will require the development of forest management plans which identify wetlands as areas of concern. Appropriate management procedures such as buffer zones will be applied. Similar statutes and regulations are in place in some of the other provinces.

Private Land Conservation

In many provinces, wetlands in the settled areas are on privately owned land. It is difficult for public agencies to secure lasting protection of these wetlands due to rising land prices and limited funds. In the last decade, some provinces have taken a "protection by example" approach to encourage public participation in wetland protection. This has been accomplished through education of the public regarding the value of wetlands, the development of provincial wetland policies, and the enacting of legislation that enables stewardship agreements, conservation easements and conservation covenants.

Each of these pieces of legislation promotes a voluntary, non-regulatory ap-

proach to wetland conservation, involving partnerships of landowners and conservation organizations. The North American Wetlands Conservation Council (Canada) recently prepared a report entitled *Canadian Legislation for Conservation Covenants, Easements and Servitudes: The Current Situation* (Silver *et al.* 1995) that provides much more detail on this subject than can be included in this paper.

The Saskatchewan *Conservation Easement Act*, adopted in 1997, is being used to protect habitats along watercourses and around wetlands. Manitoba has recently enacted the Manitoba *Conservation Agreements Act* which will permit the development of conservation easements in the settled areas. The Ontario *Conservation Land Act* permits programs designed to encourage the stewardship of conservation land that includes wetland. The *Act* encourages private landowners to act as stewards on natural areas through the payment of grants. Nova Scotia and New Brunswick have also recently adopted conservation easements acts.

The British Columbia *Land Title Act* permits the use of conservation covenants. A conservation covenant is an agreement between a landowner and another party such as a government body, conservation organization or adjacent landowner to conserve land or a particular aspect or feature of the land. These are voluntary agreements. A landowner may be motivated to grant the covenant by concern for protecting the land, by payment for the covenant and/or by receiving other benefits such as a reduction in real property taxes.

5.0 Summary and Conclusions

Five Canadian governments have now delivered strong statements on how they intend to manage wetlands in their jurisdiction. The Governments of Canada, Alberta, Saskatchewan, Manitoba and Ontario have wetland policies in place. Three other provinces — Prince Edward Island, New Brunswick and Nova Scotia — are at various stages of developing or adopting wetland policies, or have draft documents that remain "on the books." The Governments of the Yukon Territory and Northwest Territories use the federal wetland policy to guide their decisions affecting wetlands on Crown lands. The Governments of British Columbia, Quebec and Newfoundland are pursuing wetland conservation using other measures.

These policies generally promote a consistent, reasoned and far-reaching approach among government agencies to maintaining wetland functions and values. Based on extensive public consultation processes, most Canadian wetland policies:

- *Set specific objectives*, such as the protection of significant wetlands, on-site mitigation of impacts, or restoration of degraded ecosystems in areas of severe wetland loss;
- *Clarify wetland definitions*, for example, to explicitly include transitional vegetated margins, or to exclude sheetwater or cultivated areas;
- *Describe strategies*, that integrate wetlands into a sweeping range of mechanisms such as land-use planning programs, public education and awareness initiatives, wetland inventory, monitoring and research, and in the revision and development of policies and legislation; and
- *Detail actions* to be taken, such as the funding of incentive programs, the retention of all wetland ownership in Crown land disposals, the establishment of regionally-based limits for peatland development, or the prohibition of land-use applications for significant wetlands.

Canadian wetland policies emphasize demonstrable leadership in the government handling of wetlands on Crown lands, and a voluntary approach to wetland stewardship on private lands, encouraged by public awareness and education programs, and incentives. The policies explicitly recognize landowner rights and the need for cooperation of industry, business, conservation organizations and the general public in protecting wetlands. Other common themes run through wetland policies, including: a "sustainable development" approach for maintaining wetland functions in the long term, while recognizing the need for economic development; an "ecosystem" approach that provides for the dynamic nature of wetlands over space and time and their interrelationships with the surrounding environment; and a focus on maintaining wetland functions and values.

While emphasizing a voluntary, non-regulatory approach to wetland conservation, most policies acknowledge the need for regulations "where necessary" to protect the public interest. Canadian governments at all levels have a diverse suite of legal mechanisms available for conserving wetlands. This paper looks at over 30 federal and provincial or territorial statutes that influence wetland conservation across Canada. These statutes provide the authority for Crown agencies to:

- Acquire wetlands for protection,
- Regulate activities so as not to harm wetlands on public lands,
- Regulate activities on private lands where they interfere with resources under federal or provincial jurisdiction such as fisheries, migratory birds and water,
- Require public project proponents to assess and mitigate the impacts of their projects on wetlands,
- Manage land use using by-laws, zoning and environmentally sensitive areas designations,
- Provide tax incentives for conserving wetlands on private lands, and
- Enter into conservation agreements with private landowners.

Together, federal and provincial statutes provide a comprehensive set of tools to tackle the wetland issue.

Generally, published critiques indicate not that more legal tools are necessary to conserve wetlands, but rather that we need to strengthen and use the tools that we have. At the federal level, legislative power over wetlands seems best described as having "unfulfilled" potential. For example, the *Migratory Birds Convention Act* contains powers that have not been widely applied; stronger action could be considered to establish and adequately protect areas under the *Canada Wildlife Act*; and controversy in some provinces regarding jurisdiction over fish habitat needs to be addressed. Further, wetland conservation needs to be actively promoted in new strategies to establish marine protected areas, and through recent important precedents in assessing and mitigating wetland impacts under the *Canadian Environmental Assessment Act*.

Legislation is evolving in two important ways: more explicit reference to wetlands in a range of statutes, and more enabling powers for voluntary stewardship. Particularly at the provincial level, new and revised acts — and associated policies and guidelines — with broader environmental objectives are explicitly recognizing wetlands as important ecosystems worthy of special attention. For example, the Province of Quebec's *Act Respecting the Conservation and Development of Wildlife* protects wetlands as waterfowl, fish and muskrat habitat; Prince Edward Island's soon to be enacted *Wildlife Conservation Act* recognizes "heritage marshes" as areas to be protected; and British Columbia's *Forest Practices Code* prescribes wetland and riparian setbacks and limits logging according to different wetland classes.

The last decade has also seen the establishment of a stronger legal foundation for stewardship activities in Canada. The federal government amended the *Income Tax Act of Canada* in 1996 to facilitate donation of ecologically sensitive lands, easements, covenants and servitudes to municipal, Crown and non-government environmental organizations. Provinces are also promoting voluntary non-regulatory wetland conservation programs through conservation legislation, which permits the establishment of stewardship programs, conservation easements and conservation covenants. At the very local level, municipal planning acts are being used more effectively to promote stewardship programs.

This paper points to two issues that warrant further study. First, general wetland objectives are articulated in the wetland policy statements of five Canadian governments and two industry associations. However, there persists a lack of comprehensive, national vision and strategy for wetland conservation in Canada. What are we trying to achieve? How much wetland is enough? And how do we need to go about wetland conservation?

Second, while this paper describes many legal and policy tools for wetland conservation, it does not assess the effectiveness of these tools for achieving their purpose. Even on a regional or provincial basis, there exists little information on how well we are doing *on the ground* and on the contribution of policy and legislation to this reality. To determine which policy and regulatory tools work and which do not, and to develop and implement more cost-effective mechanisms, conservation agencies must begin to monitor the effects of their existing complement of tools.

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Appendix A:

Wetland Definitions

Unlike several other nations, a legal definition of "wetland" is generally not enshrined in federal, provincial or territorial legislation. However, a number of scientific publications and policies focusing on different geographic regions of the country offer distinct perspectives on what constitutes "wetland."

The Government of Canada has published the book *Wetlands of Canada* (National Wetlands Working Group 1988) and the *Federal Policy on Wetland Classification* (Government of Canada 1991). These two publications use the definition of wetlands most recently published in the *Canadian Wetland Classification System, Second Edition* (Warner and Rubec 1997). This definition has been adopted by the National Wetlands Working Group since the mid 1970s. Wetland is defined as:

> "land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment. Wetlands include bogs, fens, marshes, swamps and shallow water (usually two metres deep or less)" (Warner and Rubec 1997).

The *Canadian Wetland Classification System* recognizes three levels: class, form and type. The five "classes" of wetland in Canada are marsh, swamp, bog, fen and shallow water. The *System* is hierarchical with over 40 wetland "forms" based on site genetic factors such as hydrology, landscape setting and chemistry of waters and numerous wetland "types" based on vegetative physiognomy are also recognized.

For the purposes of wetland policy and management in Alberta, wetlands are grouped into two major classes: slough/marsh wetlands and peatlands. The *Recommended Wetland Policy for Alberta* (Alberta Water Resources Commission 1994) defines the two classes:

> "Marshes are wetlands that are permanently or periodically inundated by standing or slow-moving water and are characterized by emergent vegetation. Water levels fluctuate and open water may or may not be present. Slough is a colloquial term used in the prairies that often refers to shallow open water wetlands, but may include some marshes. Slough/marsh wetland may be the broad term used in this policy to include sloughs, marshes and the adjacent areas of shallow open water.
>
> "Peatlands in this policy will include bogs, fens and any contained areas of shallow open water. Peatlands, commonly re-ferred to as muskeg, are permanent wetlands characterized by the accumulation of peat derived from plant materials such as mosses and sedges. The water table is often at or near the ground surface.

> Bogs derive their water from precipitation, and fens are supplied with water through groundwater or surface runoff. Alberta's peatlands have taken thousands of years to develop their current depth and form."

Your Guide to Saskatchewan Wetland Policy (Government of Saskatchewan 1995) describes wetlands as follows:

> "Wetlands are low-lying areas of land covered by water often enough to sup-

port aquatic plants and wildlife for part of their life cycle. They are saturated with water long enough that their soils become hydric, or gleyed. They include both the wet basin and an area of transitional lands between the waterbodies and adjacent upland.

"Wetlands are dynamic ecosystems, and water levels and vegetation often fluctuate seasonally and annually. Open water may not be present and vegetation ranges from floating or submerged plants in open water to cattails, rushes, sedges, shrubs and willows at the water margin to grasses and trees in the transitional lands. The transitional lands are a minimum of 10 metres (33 feet) adjacent to the area covered by water at the waterbody's normal full supply level."

The Ontario *Provincial Policy Statement* (Ontario Ministry of Municipal Affairs and Housing 1997) provides a definition of wetlands:

"Wetlands means lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants. The four major types of wetlands are swamps, marshes, bogs and fens.

"Periodically soaked or wet lands being used for agricultural purposes which no longer exhibit wetland characteristics are not considered to be wetlands for the purposes of this definition."

In Quebec, a provincial wetland classification system (Buteau *et al.* 1994) is generally consistent with the classes of the Canadian *System* (Warner and Rubec 1997), but wetlands are also deemed to extend into the full riparian zone and coastal, unvegetated habitats such as rocky shores and sandy beaches (Rubec pers. comm.).

Appendix B:

Summary of Policies and Statutes by Jurisdiction

Appendix B features Canadian governments with wetland policies in place (Governments of Canada, Alberta, Saskatchewan, Manitoba, Ontario, Yukon Territory and Northwest Territories); governments that are at various stages of deliberating on wetland policies (Prince Edward Island, New Brunswick, and Nova Scotia); and governments that are pursuing wetland conservation using legislation and other measures (British Columbia, Quebec and Newfoundland) — *in this order.*

Each jurisdictional summary is organized by four sections:

- Wetland Policy
- Statutes (that have the potential for wetland conservation)
- References
- Contact

The section describing federal statutes contains published comments on the effectiveness of the statutes for wetland conservation. Some agencies at the provincial level provided comments on the effectiveness of provincial policies and statutes for wetland conservation in their jurisdiction.

Governments with Wetland Policies in Place

Government of Canada

The Government of Canada is guided by the *Federal Policy on Wetland Conservation,* released in 1992 under *Canada's Green Plan.* Seven federal statutes contribute to wetland conservation in Canada:

- *Migratory Birds Convention Act*
- *Canada Wildlife Act*
- *National Parks Act*
- *Canada Oceans Act*
- *Fisheries Act*
- *Canadian Environmental Assessment Act*
- *Income Tax Act of Canada*

Wetland Policy

The *Federal Policy on Wetland Conservation* articulates the objective of the federal government with respect to wetland conservation: to promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions. The Canadian Wildlife Service of Environment Canada was the initiating, and remains the coordinating, agency. All departments of the Government of Canada are responsible for its implementation.

The *Policy* commits the federal government, in cooperation with the provinces and territories and the Canadian public, to strive to achieve the following goals:

- Maintenance of the functions and values derived from wetlands throughout Canada
- No net loss of wetland functions on all federal lands and waters
- Enhancement and rehabilitation of wetlands in areas of Canada where wetland losses or degradation have reached a critical stage
- Secure wetlands of significance to Canadians, and
- Use wetlands in a manner that ensures their sustainability for future generations.

The *Policy* comprises seven strategies for wetland conservation, concerning:

- Developing public awareness
- Managing wetlands on federal lands and waters and in other federal programs
- Promoting wetland conservation in federal protected areas
- Enhancing cooperation with other governments and with non-government organizations
- Conserving significant wetlands in a national network
- Ensuring a sound scientific basis for policy
- Promoting international actions

Application of the *Policy* is now facilitated by the *Implementation Guide for Federal Land Managers* (Lynch-Stewart *et al.* 1996). A training program has been developed by the North American Wetlands Conservation Council (Canada) and the Canadian Wildlife Service.

Federal Statutes

Migratory Birds Convention Act

The *Migratory Birds Convention Act* implements an international treaty signed in 1916 by the United States and the United Kingdom on behalf of Canada. The *Act* focuses on the protection of migratory birds by regulating the hunting, possession, transportation and sale of migratory birds and the disturbance of their nests. The *Act* also authorizes the establishment of protection areas for migratory birds — called "Migratory Bird Sanctuaries" (MBS) — and the control and management of those areas. To be designated as a Sanctuary, a site must contain "nationally significant" habitat for migratory birds, regularly supporting at least one percent of a population of migratory bird species or subspecies (Environment Canada, Canadian Wildlife Service *Undated*).

Designation also requires the consent of the public or private landowner. The site is officially scheduled under the Migratory Bird Sanctuary Regulations, which prohibit all disturbance, hunting and collection of migratory birds and their eggs within the MBS. Contravention of the *Act* or regulations can result in fines of up to $250,000 and a court order for compensation for remedial actions.

There are 101 MBSs in Canada, totalling approximately 11.3 million hectares. Wetlands cover about half of the 11.3 million hectares of the total MBS area in Canada (Bryson and Associates 1993). However, the *Migratory Birds Convention Act* focuses on birds and nests. It does not provide for conservation of the habitat that sustains the birds through critical stages of their life cycle. The only reference in the *Act* to the protection of habitat is contained in Section 35 of the Regulations which prohibits — anywhere in Canada — the deposit of oil or any other substance harmful to migratory birds in any waters or area frequented by migratory birds.

In a study of wetlands and the law in the Prairie Provinces, Percy (1993) comments:

> *"The Act is frequently cited as an example of federal power over those wetlands that provide habitat for migratory birds, but in reality it does almost nothing to regulate wetlands... At the most, it contains an unfulfilled potential for the conservation of wetlands, for the Governor-General-in-Council is empowered to "make such regulations as are deemed expedient to protect" migratory birds and "for any other purpose that may be deemed expedient for carrying out the intentions of (the) Act..."*

Regardless, an enormous land area including extensive wetlands receives *de facto* protection under this *Act* in Canada.

Four MBSs have been designated as Wetlands of International Importance under the Convention on Wetlands (Ramsar Convention). These include the Queen Maud Gulf, Dewey Soper and McConnell River MBSs in the Northwest Territories, and the Southern James Bay MBS in Ontario. Such designation as a Ramsar site provides no legal protection under any statute in Canada. The designation is thus supported by existing protection legislation such as the *Migratory Birds Convention Act*.

Canada Wildlife Act

The *Canada Wildlife Act* enables the federal Minister of the Environment to undertake programs for wildlife research, conservation and interpretation, and to coordinate and implement wildlife policies and programs in cooperation with provincial and territorial governments. Under this *Act*, wildlife includes any animal, plant or other organism belonging to a wild species *and also the habitat* of any wild animal, plant or other organism.

Authority rests under the *Act* for the establishment of "National Wildlife Areas" (NWAs) on Canada's lands, internal waters, and territorial sea. National Wildlife Areas protect nationally significant habitats for migratory birds and, if in the national interest and with the support of the provinces, other wildlife species, especially endangered wildlife. In 1994, regulation-making authority was added to the *Act* to allow for the establishment of protected marine areas, likely to be called "Marine Wildlife Areas" (MWAs) (Fisheries and Oceans Canada *et al.* 1996). In contrast to Migratory Bird Sanctuaries, both of these types of protected area designations under the *Act* protect wildlife by prohibiting human activities that would be harmful to the wildlife *and to the environment*. Contravention of the *Act* or Regulations can result in fines of up to $250,000 and a court order for compensation for remedial actions.

The NWA and MWA designations are important tools for protecting wetlands that are determined to be "significant or critical habitats," usually for migratory birds, and are "nationally significant" (Fisheries and Oceans Canada *et al.* 1996). In addition to the legal commitment to habitat protection, both protected area designations under the *Act* apply to "internal waters," and therefore can be used to protect freshwater wetlands associated with inland lakes and rivers including the Great Lakes, as well as brackish and saltwater wetlands along the extensive coastline of Canada.

There are currently 45 NWAs protecting 287,000 hectares of habitat, with another six sites designated to become NWAs. Wetlands cover about 40% of the total NWA area (Bryson and Associates 1993).

Ten of Canada's NWAs are designated as Wetlands of International Importance under the Convention on Wetlands. The Alaksen NWA encompasses wetlands in the Fraser River estuary in British Columbia, the Last Mountain Lake NWA in Saskatchewan is a critical Prairie wetland system; Lac St. François, Cap Tourmente and Baie de l'Isle-Verte NWAs in Quebec protect vital freshwater and salt marsh wetlands; Mary's Point NWAs is partially a Ramsar site in New Brunswick; the Chignecto NWA in Nova Scotia incorporates dyked coastal wetlands; and the Polar Bear Pass NWA in the Northwest Territories is a critical Arctic wetland oasis. Other NWAs that are Ramsar sites and critical wetlands for migratory species include the St. Clair and Long Point NWAs in Ontario.

How well are the NWAs protected? The Canadian Wildlife Service has adopted an ecosystem approach to their management, considering the range of physical features and processes and their interactions, in addition to the wildlife habitat functions of the area. The Canadian Wildlife Service prepares a management plan for each NWA which specifies the activities that are to be allowed under permit. The World Wildlife Fund Endangered Spaces Campaign has called for an increase in protection standards for national wildlife areas and migratory bird sanctuaries, urging the federal government to eliminate the potential for industrial development in all NWAs, by adopting management standards equivalent to those set for the Polar Bear Pass NWA when it was established.

A recent deregulation of lands within a National Wildlife Area is considered an important precedent-setting case in terms of process and outcome. A portion of the Cape Jourimain National Wildlife Area was required to allow construction of a highway interchange for the Confederation Bridge connecting New Brunswick and Prince Edward Island. The deregulation was justified for public safety reasons, but also in the interest of

wildlife. The transfer of the 2.26 ha of land of relatively low biological value was compensated with an 89 ha parcel adjacent to the NWA, of high biological value and containing a unique plant community. The federal government considers the amount and quality of lands obtained in exchange for the deregulated parcel to be significant. The exchange represents a 40:1 compensation ratio of biologically significant lands for a smaller parcel that in comparison was biologically insignificant.

The *Canada Wildlife Act* provides the authority for the establishment of advisory bodies reporting to the Minister of the Environment. In 1990, the North American Wetlands Conservation Council (NAWCC) Canada was created under this authority. The Council coordinates the implementation of the North American Waterfowl Management Plan in Canada, and promotes wetland conservation through coordinating management, science and policy initiatives. It is supported by a national Secretariat in Ottawa and has published over 20 reports that focus on making Canadians more aware of the importance of the wise use and conservation of wetland ecosystems.

Percy (1993) emphasizes the importance of the *Canada Wildlife Act* for providing the cooperation necessary to produce the *Wildlife Policy for Canada*, a national policy that provides a framework for federal, provincial, territorial and non-governmental policies and programs that affect wildlife. The *Policy* recognizes that tantamount to its goal of maintaining and enhancing the health and diversity of Canada's wildlife, is the maintenance of ecosystems such as wetlands. However, Percy (1993) noted that the *Canada Wildlife Act* remains a limited instrument for wetland conservation in the Prairie Provinces:

> *"The intimate connection between wetlands and wildlife habitat might suggest that the (Canada) Wildlife Act would be an important source of wetland regulation. However, the Act ... provides little direct power over wetlands because of the jurisdictional limitations placed on the federal government."*

A review by the Canadian Institute for Environmental Law and Policy (Attridge 1996) of legal and policy instruments for biodiversity conservation notes the advantages of NWAs and MBSs over National Parks, referring to the "flexible, public and also private methods" for protecting wildlife using these designations. The review also commented that NWAs and MBSs are a positive contribution to the suite of federal protected areas, and avoid some of the delays and missed opportunities of the more strictly protected and publicly-owned system of national parks. Further, it suggested that both designations could be more widely used, given their potential to act as buffer areas around, or links between, protected areas such as national or provincial parks.

National Parks Act

The *National Parks Act* empowers the Minister of Canadian Heritage to acquire and manage lands as National Parks of Canada, to "be maintained and made use of so as to leave them unimpaired for the enjoyment of future generations." The *Act* has been amended to include provisions for the establishment of National Marine Parks, now referred to as "National Marine Conservation Areas." The *National Parks System Plan* guides the establishment of both the national park and national marine park systems. The goal of the Plan is to establish a representative park in each of the 39 terrestrial and 27 marine natural regions.

An analysis (Bryson and Associates 1993) of wetlands and forest lands in protected areas concluded that 1.3 million hectares within all of Canada's National Park boundaries were wetland. Examples of national parks with significant wetland components include Point Pelee on Lake Erie, with extensive freshwater marshes; Kouchibouguac in New Brunswick characterized by estuarine systems, salt marshes, freshwater habitat and bogs; and Elk Island in the Prairies with its many lakes, ponds and wetlands. Point Pelee and much of Wood Buffalo National Parks are designated as Wetlands of International Importance under the Convention on

Wetlands as are several provincial parks such as Polar Bear Park in Ontario.

Wetlands in National Parks have strong legal protection owing to the "unimpaired" clause in the *Act* and to the 1988 amendment to the *Act* that requires that "maintenance of ecological integrity through the protection of natural resources shall be the first priority when considering park zoning and visitor use in a management plan." Industrial development is not specifically prohibited in the *Act*, but the Regulations generally prohibit logging, mining and hunting within national parks. Penalties for contravening the *Act* can reach as high as $150,000 fine or six months imprisonment for hunting or disturbance of protected species identified in a Schedule to the *Act*.

Parks Canada's National Marine Conservation Area Program is relatively new. Federal-provincial agreements exist for two areas and another has been established under separate legislation. The 27 marine natural regions span the Atlantic, Arctic and Pacific Oceans, as well as the freshwater Great Lakes. National Marine Conservation Areas embody submerged land, subsoil and the overlying water column and may include wetlands, river estuaries, islands and other coastal lands.

The process of legally establishing a National Park is long and onerous, culminating in the addition of the new park through a legislative amendment to the *National Parks Act Schedule*, or through other federal statutes. Designation of National Marine Conservation Areas may be even more complicated. Attridge (1996) notes that because provinces have jurisdiction over many associated land-based activities and inland provinces have been delegated fisheries responsibilities, most marine and freshwater protected areas will require Memoranda of Understanding with provincial agencies to fully and effectively implement them.

Canada Oceans Act

With the passage of the *Canada Oceans Act*, Canada formally declared its rights and responsibilities over its maritime zones. The *Act* provides the federal government with a third marine protection program, to be developed and administered by the Department of Fisheries and Oceans. Under the *Act*, a "Marine Protected Area" (MPA) may be established for conservation and protection of: commercial and non-commercial fishery resources, including marine mammals, and their habitats; endangered or threatened marine species and their habitats; unique habitats; marine areas of high biodiversity or biological productivity; and any other marine resource or habitat as is necessary to fulfil the mandate of the Minister of Fisheries and Oceans.

The *Act* requires the development of a national strategy for "management of estuarine coastal and marine systems in waters that form part of Canada" and for the preparation of integrated management plans for MPAs. The strategy will also contain a coordinated approach to the development of a national system of MPAs. The *Act* provides the authority to enact regulations to establish MPAs, to prescribe measures for zoning and for prohibiting activities within MPAs. Fines of up to $500,000 may be levied for contravention of the Regulations.

While the *Act* pertains to tidal wetlands only, it has two advantages for wetland conservation over the other statutes that provide for protected marine areas. First, the reasons for establishing MPAs under the *Canada Oceans Act* are more broadly encompassing. The *Canada Wildlife Act* focuses on protecting marine areas to conserve migratory birds and other wildlife and the ecosystems on which they depend; while marine protected areas under the *National Parks Act* are established to represent one of the 27 marine regions. Marine protected areas under the *Canada Oceans Act* can be designated to conserve a range of resources including fisheries, endangered species, unique habitats and areas of high biodiversity or biological productivity as noted above. The second advantage is jurisdictional in nature: unlike most of the other powers represented by federal statutes with potential

to conserve wetlands, as Attridge (1996) points out, the federal government has clear authority to establish Marine Protected Areas under the *Canada Oceans Act.*

Fisheries Act

The federal government has constitutional authority for Canada's seacoast and inland fisheries. The *Fisheries Act* sets out the means by which the Minister of Fisheries and Oceans manages and protects fisheries and fish habitat. The *Act* applies to all "Canadian fishery waters," and has provisions for pollution prevention, conservation and protection of fish habitat. The *Act* also provides for significant penalties, ranging from fines to imprisonment, or orders requiring the restoration of damaged fish habitat. While federal responsibilities for inland fisheries management have been delegated to some provinces, the federal government remains responsible for fish habitat management throughout Canada.

Because wetlands can provide "fish habitat" as defined by the *Act*, recent reviews of statutes and their relationship to biodiversity or wetlands conservation have described the *Fisheries Act* as "an important tool for protecting wetlands," "a potentially important source of federal power over certain wetlands," and "in theory, a potent weapon against activities that threaten or impair wetlands" (Attridge 1996; Percy 1993; Estrin and Swaigen 1993).

Section 35 (1) of the *Fisheries Act* prohibits the harmful alteration, disruption or destruction of fish habitat. A property developer was recently charged under the *Fisheries Act* after a portion of a provincially significant wetland in Ontario was filled, dredged and bulldozed without any statutory approvals (Estrin and Swaigen 1993). Section 37 of the *Act* also supports wetland conservation because it gives the Department of Fisheries and Oceans the power to require plans and specifications of projects that have the potential to interfere with fish or fish habitat. Where a plan and/or specification is unsatisfactory, the Minister is empowered to require modifications, or to restrict or close down the work or undertaking. To date, several wetland developments have been reviewed under this process (Estrin and Swaigen 1993).

The *Wetlandkeepers Handbook* (Southam and Curran 1996) identifies additional sections of the *Fisheries Act* that are important to wetland conservation. Section 36(3) prohibits the deposit of a deleterious substance in any water frequented by fish. Section 41(4) provides the means for halting a project through a Court injunction where a violation of the *Act* has occurred or has the potential to occur, causing irreparable harm to fish habitat. This valuable procedure can be used to prevent imminent damage to or destruction of a wetland habitat that contributes to a fishery.

The *Policy for the Management of Fish Habitat* (Fisheries and Oceans Canada 1986) was developed to guide implementation of the habitat conservation and protection provisions of the *Fisheries Act.* The *Policy*, together with associated guidelines and decision frameworks, has provided a more structured approach to fish habitat conservation. The *Policy's* No-Net-Loss Principle contributes significantly to habitat conservation, even though there is much work to be done to refine its implementation. The *Policy* provided a model for the development and implementation of wetland policy in Canada. The *Federal Policy on Wetland Conservation* and its *Implementation Guide* emulate the fish habitat counterparts in the emphasis on functions, an objective of no net loss, the hierarchy of mitigation options and compensation priorities.

The *Fisheries Act* may have substantially contributed to wetland conservation in Canada, but there are important limitations to the application of the *Act* to wetland habitats. The federal government does not have jurisdiction with respect to aquatic habitats generally if those habitats cannot be shown to contribute directly or indirectly to an existing or a potential fishery. The *Act* also focuses on fisheries resources, not

ecosystem management or protection, and therefore does not promote the integrated management of a resource such as wetlands (Percy 1993).

Percy (1993) notes that the powers of the *Fisheries Act* essentially allow the federal government to override any provincial legislation in favour of fisheries interests. However, within the Prairie Provinces, Percy (1993) also observes that the extension of federal power would be politically controversial. Not only have the provinces felt that the traditional federal power is too broad, but independent inquiries have recommended the transfer to the provinces of jurisdiction over inland fisheries on the Prairies. Further, it seems unlikely that provincial officers will extend enforcement of the federal *Act* into areas, such as wetlands, that have previously been considered as totally within provincial jurisdiction. For the latter two reasons, Percy (1993) concludes that, in the Prairie Provinces at least, "the potential that undoubtedly exists for federal regulation of wetlands under the *Fisheries Act* may not be fully realized in practice."

Canadian Environmental Assessment Act

The *Canadian Environmental Assessment Act* (CEAA) sets out responsibilities and procedures for the environmental assessment of projects involving the federal government. The *Act* applies to projects where federal government holds decision-making authority — whether it proposes a project, sells, leases or transfers control of land, contributes money or other financial assistance, or exercises a regulatory or "permitting" duty. The *Act* ensures that the environmental effects of projects are considered early in the project planning stages, and that the public has an opportunity to participate in the process. It relies on the self-assessment of projects by federal agencies for the majority of projects, and emphasizes that the level of effort required to undertake an environmental assessment (EA) should match the scale of the project's likely environmental effects. There are four main EA tracks: screening, comprehensive study, mediation or a panel review.

Specific reference to wetlands is contained in CEAA regulations. A wetland is defined as "a swamp, marsh, bog, fen or other land that is covered by water during at least three consecutive months of the year." Several references are also made to projects or activities that could have an impact on "water bodies" (the definition of which includes wetlands) and might therefore require a federal environmental assessment. If, for example, a *Fisheries Act* authorization is required for a project or activity that will harm fish habitat by draining or altering the water levels of a water body, then a federal environmental assessment may be conducted.

Because CEAA casts such a broad net over all the potential ways that the federal government can affect wetlands, it provides the primary means of bringing the objectives of the *Federal Policy on Wetland Conservation* (FPWC) to bear on federal projects. The FPWC *Implementation Guide for Federal Land Managers* (Lynch-Stewart *et al.* 1996) describes in step-by-step detail how to integrate the achievement of federal wetland objectives with the procedures of the environmental assessment process. CEAA also provides a framework and funding to ensure that the public can participate in decisions about projects that have the potential to harm wetlands.

Environment Canada recently developed the *Wetlands Environmental Assessment Guideline* (Environment Canada, Canadian Wildlife Service 1998) to identify for proponents of projects the types of information and analyses that the department would expect in the wetlands section of an environmental impact statement. The *Guideline* was developed to promote "best practices" for environmental assessments under the *Canadian Environmental Assessment Act* that involve wetlands.

The value of environmental assessment of federal projects involving wetlands

was recently demonstrated in the construction of the new Canadian Museum of Nature facility in Aylmer, Quebec. It has been a controversial, high-profile case which provided important lessons for federal officials dealing with wetland sites.

Although the *Federal Policy on Wetland Conservation* is not legally binding, private citizens and environmental groups have held the federal government accountable for decisions affecting wetlands. The *Policy* notes losses of wetland functions as a result of federal actions should be compensated. An example of the role of public input is the case of construction of the Canadian Museum building. An independent panel review of the environmental screening for the Museum's new collections facility in Aylmer, Quebec in 1996-1997 directed the federal government to consider restoring former wetlands or constructing new wetlands on federal lands as near the site as possible on a replacement ratio of at least 2:1. The Panel wrote that there needs to be a public commitment on the part of the federal government to undertake the necessary compensation. In the long run, Museum executives hope that the Aylmer facility will provide valuable information about the assessment and mitigation of impacts on wetlands, and a model for managing a large wetland property. The Museum is committed to ensuring the long-term conservation of wetlands adjacent to the Aylmer facility, and their use in scientific research, public awareness and education.

It is clear that one of the major limitations of the use of CEAA for wetland conservation is the lack of practical guidance for applying mitigation and compensation measures for wetlands. Drawing from the substantial body of growing expertise on this subject in Canada and the United States, the North American Wetlands Conservation Council (Canada) has published a report on the National Workshop on Wetland Mitigation and Compensation held in April 1997 (Cox and Grose 1998). It is also considering development of principles and guidelines and a practical framework for applying wetland mitigation and compensation in Canada. Together, these further studies could provide detailed advice on when, where and how to mitigate impacts to wetlands.

In a review of biodiversity law and policy in Canada, Attridge (1996) offered a critique of CEAA, noting that the *Act* suffers from a number of important weaknesses that need to be addressed to fully inform federal decision-making. Consequently, according to the view of Attridge (1996), while Canada has national environmental assessment legislation, it still does not accomplish comprehensive, independent review and decision making to avoid or mitigate impacts upon the biodiversity of ecosystems such as wetlands.

Income Tax Act of Canada

In February 1995, the Minister of Finance announced a new initiative under the *Income Tax Act of Canada*, creating provisions for donation of Ecological Gifts. Donation by private individual and corporate landowners of "ecologically sensitive land" is emerging as a new tool in conserving sensitive wetlands and other ecosystems and their associated biodiversity across Canada.

Ecological gifts include the donation of fee simple title for ecologically sensitive lands and environmental conservation covenants, easements and servitudes as permitted under provincial or territorial legislation. The provisions of the *Income Tax Act* are specific to donations of land that are under private title, thus excluding donation of leased rights or use of Crown-held properties. Thus any private landowner or corporation filing an income tax return in Canada may make use of the Ecological Gifts Program. Water bodies and freshwater or ocean shoreline properties that are not in private title or where the title is in dispute, or unknown, do not qualify.

An ecological gift must satisfy the same criteria for all other philanthropic dona-

tions established by Revenue Canada or Revenue Quebec in order to qualify for preferred tax treatment. Such donations may be deducted against up to 100% of annual income and the unused portion of a receipt may be carried forward for up to five years. Donors must ensure that the valuation methods used to establish the value of gifts of easements, covenants or servitudes for the purposes of a tax deductible receipt are approved by Revenue Canada. The value of ecological gifts of land title are based upon a fair market assessment undertaken by an accredited real property assessor approved under provincial authority.

The *Income Tax Act* allows ecological gifts to be received by qualified environmental charities, any Canadian municipality and any federal, territorial or provincial Crown agency. Environment Canada has established a list of environmental non-government organizations that can receive such gifts. To date, 127 registered charities have been listed by Environment Canada as meeting the eligibility criteria under the *Act*, which states specifically that:

(a) the organization is a federally registered charity in Canada; and

(b) one of the organization's statements of purpose must include the conservation of land or environmental heritage in Canada.

Charitable organizations of a national nature may receive ecological gifts located in any province or territory; other organizations act within a province or more locally.

The first gift was completed in British Columbia in December 1995 and there has been an increasing number of gifts per year since then. To date, 90 ecological gifts in eight provinces have been completed. There have been no gifts in Manitoba, Newfoundland, Yukon or Northwest Territories as yet. Gifts include 60 land titles, 26 easements and four covenants.

The total land area gifted to date exceeds 10 200 hectares and is valued at about $25 million. Gifts range in size from less than one hectare to almost 1,000 hectares and have been individually valued in a range from $15 000 to over $6 million. A wide range of representative, unusual, rare or threatened habitats have been donated for conservation to date. These comprise numerous wetlands including salt marshes on both the Pacific and Atlantic coasts, riverine wetlands, Prairie sloughs and temperate freshwater marshes and swamps.

Unfortunately, the *Income Tax Act* still requires donors to pay deemed capital gains tax on donations of ecological gifts. In many cases, particularly with the donation of the value of a conservation easement or covenant, the amount of the capital gains tax payable approaches the value of the benefit received. The Ecological Gifts Program would be far more effective if such gifts were exempted from capital gains taxes, thus creating a reasonable tax benefit, not just a tax deduction, to the donor.

The Ecological Gifts Program is described in material available from Environment Canada: *Ecological Gifts: Implementing Provisions of the Income Tax Act of Canada* (Rubec 1998) and *Ecological Gifts: A Checklist for Donating Ecologically Sensitive Land in Canada* (Environment Canada 1998). These documents are also available on the following Web Site: http://www.ec.gc.ca/cws-scf/habitat/index_e.html

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(For other references see References section of this paper.)

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Government of Alberta

Wetland protection in Alberta is guided by *Wetland Management in the Settled Area of Alberta: An Interim Policy* released in 1993, which provides direction for the management of slough/marsh wetlands in the southern portion of the province. Soon after the release of this Interim Policy, a draft policy for managing Alberta's peatland and non-settled wetlands was available for discussion purposes.

The Government of Alberta merged these two documents in 1994 into a *Recommended Wetland Policy for Alberta* which remains in draft form. It is due for application after the *Water Act* is implemented. A range of provincial statutes also offer a measure of legal protection for wetlands while advancing other statutory objectives.

Wetland Policy
Although wetland management is currently guided by the *Interim Policy*, this summary will focus on the draft *Recommended Wetland Policy for Alberta*.

The *Recommended Wetland Policy* was prepared in response to the loss of sloughs and marshes in the Settled Area and in anticipation of increased demands on peatlands in the province. It applies to both public and private lands. The role of policy is to lay out the general framework for wetland management, provide clear, consistent direction in the management of wetlands and to streamline decision processes.

Provincial government departments and agencies will cooperate and participate in the implementation of the wetland policy and consider wetland functions and values in their policies, programs and activities. Alberta Environmental Protection will assume primary responsibility for coordinating wetland management and policy implementation, and will also chair an interdepartmental committee to guide policy implementation.

The *Recommended Wetland Policy* contains principles, the wetland goal of the Government of Alberta, objectives for each of the main wetland types (slough/marsh wetlands and peatlands) and strategies for wetland policy implementation.

- The goal focuses on sustaining wetland benefits, now and in the future.
- The principles recognize:
  - the range and importance of wetland benefits;
  - that wetlands are dynamic ecosystems;
  - that wetland management is a shared responsibility among all levels of government, non-government organizations, industry and individuals;
  - that decisions need to be based on the best available information, shared with the public; and
  - that the needs of future generations need to be considered.
- The objectives for slough/marsh wetlands are:
  - to conserve existing slough/marsh wetlands in a natural state;
  - (where this is not possible) to minimize the negative impacts of activities or use on slough/marsh wetlands;
  - to mitigate degradation or loss of slough/marsh wetland functions and values as near to the site of disturbance as possible, where necessary; and
  - to enhance, restore or create wetlands (in areas where loss or degradation of wetland is significant).
- The objectives with respect to peatlands are:
  - to formally designate individual peatland ecosystems for preservation, based on their significance at a provincial, regional or local scale;
  - to allow activities on peatlands and development of peat resources within acceptable limits; and
  - to minimize, and mitigate where necessary, the effects of peatland developments on the surrounding land and water.
- The strategies include:
  - Manage wetlands as ecosystems and sustain wetland benefits through government programs and activities. For example: incorporating functions and values in planning programs; using existing legislation to meet the objectives of the policy; entering into written legal agreements with interested landowners to protect important wetlands on private land; and funding of incentive programs.
  - Implement the policy on a regional basis (to recognize regional variability in things like wetland type, size and distribution). For example: regional wetland contacts will be designated; local authorities will be encouraged to implement the policy; regional wetland management strategies will guide decisions about development proposals and drainage applications; limits for peatland development will be established in a regional context.
  - Promote public awareness and understanding of wetlands, including wetland functions and values, issues and management in Alberta. It will address wetland management topics such as wetland ownership, including the fact that the water in wetlands is a provincial resource; how property taxes are assessed; the possible effects on wetlands of land clearing, livestock production and chemical application.
  - Apply the policy to the management of public land. For example: public lands with important wetlands will not be sold; the Crown retains ownership of slough/marsh wetlands that are permanent and naturally occurring waterbodies, even if the surrounding land is privately owned.
  - Encourage and facilitate public involvement in wetland management.
  - Coordinate a provincial wetland inventory and research data base.

Other interesting notes:

- "Sheetwater," a phenomenon where shallow, open water temporarily floods low, relatively flat terrain, is not considered a wetland.
- The *Recommended Policy* describes and distinguishes the ecological functions and values of wetlands.

Provincial Statutes

While there is no single wetland statute, statutes such as the *Environment Act*

have the potential to protect specific wetlands through the granting of permits, licences or approvals. Legislation such as the *Provincial Parks Act*, the *Water Resources Act* and the *Public Lands Act* have been used to protect specific wetlands. The drafting of a new *Water Act*, to replace the *Water Resources Act*, recognizes the importance of protecting wetlands by requiring that a strategy for protecting the aquatic environment be developed as part of the provincial water management planning framework. It is anticipated that this new legislation will be an important tool for wetland protection.

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Government of Saskatchewan

The Province of Saskatchewan is using both wetland policy and legislation to protect wetlands. Wetland protection has been focused on the agricultural regions of the province, as these wetlands are under the greatest threat of loss.

Wetland Policy

The *Saskatchewan Wetland Policy* was adopted in 1995, in response to an absolute loss of 10% of wetland areas. Of the remaining wetland areas, 40% have experienced transitory effects, which means they may have been cultivated or drained, but the natural low-lying area still exists.

The *Wetland Policy* is the Province of Saskatchewan's commitment to the conservation of wetlands. The key "wetland policy statement" states the government's belief in the "sustainable management of wetlands" to maintain the "numbers, diversity and productive capacity of wetlands."

Wetland Policy implementation is guided by provincial government departments and agencies; and led by the Saskatchewan Wetland Conservation Corporation.

The *Wetland Policy* contains objectives, policy principles, a wetland definition, descriptions of causes of wetland loss, benefits of wetlands, and "next steps" that include activities designed to meet the policy objectives.

Objectives include:

1. To encourage sustainable management of wetlands on public and private lands to maintain their functions and benefits.
2. To conserve wetlands that are essential to maintain critical wetland species or wetland functions.
3. To restore or rehabilitate degraded wetland ecosystems where previous destruction or alteration has resulted in a significant loss of wetland functions or benefits.

Wetland Policy principles acknowledge: rights of landowners and their role in stewardship of land; interest of aboriginal

people; value of integrated approach to land-use planning and management; value of partnerships and cooperation among governments and the public for achieving policy objectives; need for government organizations to recognize and consider wetland functions in policies, programs, decisions; and the need for an ecosystems approach.

The wetland definition includes "both the wet basin and an area of transitional lands between the waterbodies and adjacent upland... The transitional lands are a minimum of 10 metres (33 feet) adjacent to the area covered by water at the waterbody's normal full supply level."

"Next Steps" include increasing public awareness of wetland functions and benefits; increasing wetland monitoring; coordinating government policies and programs; developing land-use planning guidelines for wetland management; and encouraging landowners to maintain wetlands.

Additional interesting notes (Government of Saskatchewan 1995):

- "Low-lying areas predominantly under cultivation are not considered wetlands, as they have been converted to other uses."
- "...landowners can manage wetlands on their own lands. Under *The Water Corporation Act* landowners are required to obtain approval to construct ditches or other works that cause water to leave their land."
- Government and non-government agencies that provide technical advice and funding for wetland restoration or management are identified.

Provincial Statutes

Saskatchewan has several statutes, such as the *Environmental Assessment Act*, which have the potential to protect specific wetlands through the granting of permits, licences or approvals. Key statutes used to protect wetlands are *The Wildlife Habitat Protection Act* and *The Conservation Easement Act*. *The Wildlife Habitat Protection Act* is used effectively to protect specific wetland habitat areas. *The Conservation Easement Act* is a key tool for the protection of wetlands on private lands by permitting legal agreements between landowners and qualified conservation agencies. Under *The Water Corporation Act*, landowners are required to obtain approval to construct ditches or other works that cause water to leave their land.

References

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Government of Manitoba

Wetland protection in Manitoba is being directed by four conservation policies within the *Manitoba Water Policies*. The *Manitoba Water Policies* are a comprehensive group of policies that address the management and development of water resources, including wetland. Provincial statutes also offer a measure of legal protection for wetlands while advancing other statutory objectives.

Wetland Policy

The Government of Manitoba adopted the *Manitoba Water Policies* in 1990, representing a commitment to programs and initiatives designed to ensure the sustainable development of the province's water resources.

Application of the policies is the responsibility of government agencies working in partnership with an informed public, and will involve rural municipalities, local government districts, conservation districts, local soil and water interest groups, nature groups, private organizations, developers, businesses, and the general public.

The *Water Policies* are statements of intent organized according to seven objectives: water quality, conservation, use and allocation, water supply, flooding, drainage and education. For each of the policy statements, an "Application" section identifies specific activities or initiatives that *will* be carried out by the Government of Manitoba and suggested activities that *can* be carried out by local governments, conservation districts, landowners, industry, business, conservation groups and the general public.

Although the implementation of all the objectives requires consideration of wetlands, the objective regarding *conservation* explicitly refers to wetlands:

> *"to conserve and manage the lakes, rivers, and wetlands of Manitoba so as to protect the ability of the environment to sustain life and provide environmental, economic, and aesthetic benefits to existing and future generations."*

Under the conservation objective there are four specific policies:

- River, lake and shoreland habitat and the general environmental, subsistence and economic values of rivers, lakes and wetlands shall, where possible, be conserved.
- Soil conservation, wetland retention, and the application of appropriate land-use practices shall be promoted primarily by the provision of incentives, but with regulation where required, not only as essential elements of water conservation and protection, but also as key measures to reduce siltation impacts, downstream flooding and one-point source pollution.
- Those waterways whose cultural, natural and/or recreational values are of provincial or national significance shall be given special consideration. (The designation of Heritage Marshes provides for the conservation of major marshes such as Oak Hammock Marsh.)
- Water retention, and control and timing of runoff, shall be promoted as part of watershed management.

Interesting activities and initiatives under each of these policy statements for the Government of Manitoba include:

- Identify and monitor... ecologic and socio-economic values....of wetlands.
- Protect ecologically significant Crown land, and water-related ecosystems on Crown land by either withholding these lands from sale or lease, or placing special conditions or restrictions on their use.
- Ensure that integrated planning approaches are used in resource management projects, whereby all potential impacts and opportunities affecting the water-related ecosystem are considered.
- Provide technical assistance and economic incentives to local authorities, organizations and farmers to develop and implement soil, water and habitat conservation projects and to incorporate conservation measures into community projects and farm management.
- Explore and promote technologies and land uses that can replace those causing degradation of aquatic ecosystems.

- Review and modify government legislation and policy to ensure that they support conservation.
- Regulate activities and enforce compliance, where necessary, to ensure that the public's general conservation interests are not undermined.
- Support the retention of wetlands, through promotional initiatives, incentives and regulation where appropriate, as a highly effective mechanism to store and slow runoff while accomplishing numerous other conservation objectives.
- Provide or support incentives to encourage use of privately-owned marginal lands for water retention and wetland habitat.

Provincial Statutes

Manitoba has several statutes, such as the *Environment Act*, which have the potential to protect specific wetlands through the granting of permits, licences or approvals. Many of the wetlands under the greatest threat of loss in Manitoba are on private land in the agricultural areas of the province. To protect wetlands in this region the province has enacted the *Manitoba Habitat Heritage Act*, setting up the *Manitoba Habitat Heritage Corporation*, which has the ability to purchase wetland habitat for protection and enter into conservation agreements. The *Manitoba Conservation Agreements Act* provides for the purchase or donation of conservation easements of habitats including wetlands under long-term agreements. It is hoped that this may provide a mechanism for long-term wetland securement on a large scale.

Comments on Effectiveness (Colpitts pers. comm.)

Manitoba is still some ways away from a "no net loss" state for wetlands. In general, there has been little effort expended on the enforcement of current legislation and policy pertaining to the indiscriminate drainage or destruction of wetlands. However, progress is being made. In the last two years, the Department of Natural Resources has undertaken some enforcement action under the *Manitoba Water Rights Act*. This action has been taken primarily when disputes have arisen between landowners due to blatant cases of illegal drainage. Additional staff have been applied to this initiative and early results are very encouraging. Some rural municipal councils have become so frustrated with the drainage of wetlands on private land into municipal drains and road ditches that they have passed by-laws under the *Municipal Act* to discourage such practices. In 1997, complaints from municipalities and landowners over indiscriminate drainage led to the establishment of an inter-departmental Drainage Task Force directed by the Department of Natural Resources. The Task Force report is due shortly.

Reference

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Government of Ontario

The 1996 *Provincial Policy Statement* issued under the authority of the *Planning Act* replaced the Comprehensive Set of Policy Statements, including the 1992 *Wetlands: A Statement of Ontario Government Policy.* The protection of specific wetlands is also being achieved through the application of various provincial statutes.

Wetland Policy

The Ontario *Provincial Policy Statement* consists of several policies of provincial interest related to land-use planning. The Ontario *Planning Act* requires that planning authorities "shall have regard to" policy statements in making decisions on all applications.

The *Natural Heritage Policies* (section 2.3 of the *Provincial Policy Statement*) is aimed at protecting natural heritage features and areas from incompatible development. The *Policies* state:

a) Development and site alteration will not be permitted in... significant wetlands south and east of the Canadian Shield.

b) Development and site alteration may be permitted in... significant wetlands in the Canadian Shield...if it has been demonstrated that there will be no negative impacts on the natural features or the ecological functions for which the area is identified.

- *Development and site alteration may be permitted on adjacent lands to a) and b) if it has been demonstrated that there will be no negative impacts on the natural features or on the ecological functions for which the area is identified.*
- *The diversity of natural features in an area, and the natural connections between them should be maintained and improved where possible.*
- *Nothing in policy 2.3 is intended to limit the ability of agricultural uses to continue.*

The *Provincial Policy Statement* allows planning authorities to "go beyond the minimum standards established in provincial policies, in developing official plan policies and when making decisions on planning matters." For example, a planning authority may choose to include regionally or locally significant wetlands in their planning policies, in addition to those that have been identified as provincially significant by the Ministry of Natural Resources.

While directed primarily at the land-use planning process for privately-owned lands, the wetland policy must also be considered in planning decisions affecting Crown lands. For example, wetlands located on Crown land are identified as "Areas of Concern" during the preparation of forest management plans and are given appropriate protection at that time.

The *Provincial Policy Statement* states that "The diversity of natural features in an area, and the natural connections between them should be maintained and improved where possible." This provides planning authorities with the opportunity to develop an integrated natural heritage system, by maintaining, restoring or creating linkages between discrete natural heritage features and areas.

The *Natural Heritage Policies* recognize the concept of adjacent lands, which are defined as "those lands, contiguous to a specific natural heritage feature or area, where it is likely that development or site alteration would have a negative impact on the feature or area." Development may be permitted on adjacent lands if it has been demonstrated that there will be no negative impacts on the natural features or ecological functions for which a wetland is identified. The province recommends an adjacent land width of 120 metres (almost 400 feet) for wetlands. Local planning authorities may use different widths of adjacent land provided they meet the same objectives.

Provincially significant wetlands are identified using the *Ontario Wetland Evaluation System.* A *Natural Heritage*

Reference Manual is being prepared to assist in the interpretation and application of the policy statement. This reference manual is a support document to the *Provincial Policy Statement*, and will provide:

- information on the ecological functions and societal benefits provided by wetlands and other natural heritage features and areas;
- technical information on the methods used to identify and evaluate natural heritage features and areas;
- a recommended planning approach to developing a natural heritage system; and
- a recommended approach to assessing the potential impacts of development in or adjacent to wetlands and other natural heritage features and areas.

Comments on Effectiveness (Potter pers. comm.)

The effectiveness of the new wetland policy is not yet known. Prior to the most recent legislative reforms, the *Planning Act* stipulated that policies developed and land-use planning decisions made by planning authorities "shall be consistent with" policy statements issued under the *Act*. Reforms to the *Act* now require that planning authorities "shall have regard to" policy statements. This change was aimed at providing planning authorities with some flexibility to accommodate local planning needs.

The *Provincial Policy Statement* indicates that "The Province, in consultation with municipalities, will identify performance indicators for measuring the effectiveness of some or all of the policies, and will monitor their implementation." Some planning has been done in this regard.

One very clear limitation of the current policy is that it does not recognize peat extraction as a development activity. Peat harvesting, which is common in some parts of Ontario and results in obvious wetland losses, does not "trigger" the wetland policy, because it is not considered to be "development." Local planning authorities may institute peat extraction by-laws, but the province has no control over this process.

Provincial Statutes

There is no single statute protecting wetlands, but statutes such as the *Environmental Assessment Act* can protect wetlands through environmental assessment and the approvals process. The *Ontario Water Resources Act* has been used to protect the hydrologic values of wetlands. The *Crown Forest Sustainability Act of Ontario*, anticipated in 1998, will require the development of forest management plans which identify wetlands as areas of concern. Appropriate management procedures such as buffer zones will be applied. Public involvement in wetland protection is possible through stewardship agreements which are permitted under the *Conservation Land Act*.

The Conservation Land Tax Incentive Program is an important voluntary conservation incentive program, under which private landowners pay no property tax on that portion of their property which has been determined to be "conservation lands." Provincially significant wetlands are considered to be conservation lands, for the purposes of the Program.

Modifications to Ontario's *Conservation Authorities Act* are planned. These would define flood control and protection of provincially significant conservation lands (including wetlands) as the provincial interest in conservation authority business. Revisions to the *Act's* regulations on fill and construction are also planned, to concentrate on important wetlands, shorelines and other natural-hazard areas.

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Governments of the Northwest Territories and Yukon Territory

The Federal Policy on Wetland Conservation guides the territorial governments in their decision making with respect to wetlands on Crown lands.

The Northwest Territories and the Government of Canada are committed to developing a Protected Areas Strategy. The purpose of the Strategy is to provide a framework for the overall development and management of a system of protected area. Wetlands are one component of the protected areas.

Land claims settlements have placed large tracts of land under private ownership. Virually all land claims agreements require that certain lands be designated as either national or territorial parks, special management areas, ecological reserves or habitat protection areas. Within the land claims agreement there is the commitment to the creation of new National Parks and National Wildlife Areas. Wetlands are included in these protected areas.

Wetlands are recognized as a discrete category of landforms that merit special consideration under the draft Yukon Protected Areas Strategy. A process has been put into place to coordinate efforts directed through the Strategy for the management and designation of selected wetlands as habitat protection areas. Wetlands that are designated as protected areas become eligible for enhanced protection from human activities that could have harmful effects.

As of January 1999, the new territory of Nunavut will be established in the Eastern Arctic and the new government will be setting its own policies and legislation.

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Governments with Draft Wetland Policies

Government of Prince Edward Island

Wetland protection on Prince Edward Island is through the *Environmental Protection Act.* The province is currently drafting a *Policy on Small Wetlands on Prince Edward Island,* in conjunction with the Eastern Habitat Joint Venture, to encourage the conservation of wetlands on private lands.

Draft Wetland Policy

The *Policy on Small Wetlands on Prince Edward Island* is currently being drafted to protect wetlands on private land. Many of these wetlands are still prone to destruction because they are often out of public view and infilling of these isolated wetlands is often deemed insignificant. The goal of the *Policy on Small Wetlands on Prince Edward Island* will be *to protect small wetlands of 2.0 hectares or less from destruction.* This will be accomplished through educational material to raise the awareness of private landowners as to the value of wetlands and the need for permits should any activities be planned on or near wetland. The policy will also make recommendations on how to deal with requests for wetland alterations and options to pursue if violations occur.

Provincial Statutes

The most valuable tool for the protection of wetlands is the *Environmental Protection Act* which requires an environmental assessment and impact statement prior to the Minister issuing

a permit to alter a wetland. Wetland habitats are often fish habitats and a joint administrative arrangement between federal fisheries officials administering the *Fisheries Act* and provincial officials has led to a co-ordinated review of all applications for alterations of watercourses, including wetlands. A Watercourse Alteration Committee operates under the following policy: "Alteration or destruction of wetlands will only be permitted if the alteration is deemed to be necessary in the interest of the general public or toward the public good." A first approach for the Committee is contact with contractors to ensure awareness of the Acts and Regulations as they apply to wetlands and other watercourses. *P.E.I. Watercourse and Wetland Alteration Guidelines* (Revised 1995) are available to the general public.

The *Wildlife Conservation Act*, proclaimed in 1998, is anticipated to be a valuable tool for the protection of specific wetlands because it makes provision for the designation and regulation of certain wetlands, marshes and rivers that are of historical and biological value. The *Natural Areas Protection Act* has also been effective for specific wetland protection because it targets wetlands among other natural habitats.

Comments on Effectiveness (Curley pers. comm.)
Permit applications for watercourse and wetland alterations have risen from 60 in 1993 to over 600 in 1998, largely because of better awareness and effective enforcement.

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Government of New Brunswick

A *Draft Provincial Policy on Wetlands* has been approved in principle by the New Brunswick government. Public consultation is necessary before the *Policy* can be formally adopted by the province. Development affecting wetland in the province is currently regulated by existing statutes.

The *Land Use Policy for Coastal Lands* has been approved and is now being drafted into regulation. The regulation is anticipated to be in force in 1999.

Draft Wetland Policies and Guidelines

It is the goal of the *Draft Provincial Policy on Wetlands* to ensure the conservation of New Brunswick wetlands. The objectives are *to maintain the area and function of provincially significant wetlands; maintain the function of regionally significant wetlands; and to further conserve all remaining wetlands.*

The *Land Use Policy for Coastal Lands* under the *Community Planning Act* has specific provisions for protection of coastal wetlands, beaches and dunes. The goal is to conserve the ecological integrity, character and territory of coastal features, manage development on coastal lands and enhance public access to, and use of, coastal lands.

The rapid expansion of peat mining in the province has led to a greater level of awareness of the potential adverse effects of this activity on the environment. *Guidelines for Peat Mining Operations in New Brunswick*, 1998, are intended to assist in planning the commercial development of peatland to minimize adverse impacts on the environment. They also serve as a tool to evaluate development proposals. It is recognized that the removal of peat permanently changes the character of the peatland. Peatland development plans must incorporate significant natural areas that will not be ditched or mined.

Provincial Statutes

Regulations under the *Clean Environment Act* and the *Clean Water Act* provide the only specific regulatory mechanisms for controlling wetland loss in New Brunswick through the granting of permits, licences and approvals. The protected area designation under the *Clean Water Act* also offers protection of wetlands that provide water to municipalities. Other provincial statutes such as the *Crown Lands and Forests Act* and the *Ecological Reserves Act* provide opportunities for managing wetlands on Crown land.

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Government of Nova Scotia

Draft Wetland Policy

Wetland protection in Nova Scotia is being legislated through the *Environment Act* and its associated *Environmental Assessment Regulations (EAR)*, *Activities Designation Regulations (ADR)*, and *Wetlands Directive*. Any alteration of wetlands including those less than two hectares in area are designated as an activity under the *ADR* by the *Wetlands Directive* and requires an approval under the *Act*. Activities that disrupt a total of two hectares or more of a wetland are designated Class I undertakings under the *EAR* and must submit to an environmental assessment approval process. The *Wetlands Directive* describes the evaluation process to be used in making approval decisions with respect to wetlands less than two hectares. Currently, the province is developing a *Policy Respecting the Issuance of Approvals for Alterations to Wetlands and Watercourses*, which will supersede the *Wetlands Directive*.

Provincial Statutes

The *Environmental Assessment Regulations* under the Nova Scotia *Environment Act* requires that an environmental assessment approval process be undertaken for any activities that will disrupt a total of two hectares or more of wetland on either public or private lands. The Nova Scotia Department of the Environment has interpreted this section of the *Regulations* to also apply to projects that have impacts on more than one wetland smaller than two hectares, but the total area of wetland disrupted is two hectares or more. When determining the area of disruption, the Department of the Environment includes (a) the footprint of works that are proposed and (b) areas of the wetland(s) that may be adversely affected by the works. The *Wetlands Directive*, issued under the *Act*, requires an approval for projects which will disrupt wetlands smaller than two hectares in size on both private and public lands. The *Directive* outlines the procedure to be followed respecting requests to alter or infill wetlands and an evaluation process for wetlands less than two hectares.

The *Wetlands Directive* will be replaced by a *Policy Respecting the Issuance of Approvals for Alterations to Wetlands and Watercourses* under the *Environment Act*. The draft *Policy* identifies wetlands as sensitive aquatic ecosystems under the *Activities Designation Regulations*, and any alteration of wetlands is designated as an activity requiring an approval through the *Environmental Assessment Regulations* (two hectares and greater) or the *Approvals Procedures Regulations* (less than two hectares). The draft *Policy* addresses issues respecting alterations to wetlands, including cumulative impacts or alterations within a single wetland or system of wetlands, and mitigative or compensatory measures.

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Governments pursuing Wetland Conservation using other Measures

Government of British Columbia

Currently, British Columbia does not have a wetland policy. Provincial environmental groups have published two citizen's guides to wetland protection: *The Wetlandkeepers Handbook: a practical guide to wetland care* and *Protecting British Columbia's Wetlands: A Citizen's Guide*. Both publications educate the public as to the importance of wetlands and identify how existing statutes can be used for wetland protection. The British Columbia Ministry of Environment, Lands and Parks has a wetland working group that plans to develop a strategic framework for wetland conservation and management.

Provincial Statutes

While no provincial law protects wetlands, some measure of wetland protection and conservation has been achieved through certain statutes. Legislation that enables the designation of protected areas such as provincial parks, ecological reserves and wilderness areas has secured the legal protection of specific wetlands. The *Water Act*, *Waste Management Act* and *Environmental Assessment Act* can protect wetlands because they require a permit, licence or approval be given prior to a project being initiated. The *Wildlife Act* is the chief provincial law for wildlife and endangered species protection and consequently offers some legal protection for wildlife species that may reside in a wetland. Many wetland areas have also been secured/conserved through use of Wildlife Management Area designation under the *Wildlife Act*. While this is not a "protected" status, it does provide some measure of control over activities that can be damaging to wildlife habitat. An important new statute is the *Forest Practices Code of British Columbia Act* which includes wetland and riparian setbacks. Amendments to the *Land Titles Act* allow for conservation covenants to be granted to qualified conservation organizations and government bodies as a means of protecting privately-owned wetland.

Municipalities have a role to play in wetland protection because they control land use and development in those areas of the province where wetlands are under the greatest pressure for conversion — the lower mainland, Okanagan Valley and Vancouver Island. The *Municipal Act* provides municipalities with the ability to protect the environment by designating environmentally sensitive areas and parks, regulating tree cutting and other planning powers.

References

Nowlan, L. and B. Jeffries. 1996. *Protecting British Columbia's Wetlands: A Citizen's Guide*. Co-published by West Coast Environmental Law Research Foundation and British Columbia. Wetlands Network. Vancouver, British Columbia. Available: www.vcn.bc.ca/wcel/wcelpub/1996 Accessed May 1998.

Southam, T. and E.A. Curran (editors). 1996. *The Wetlandkeepers Handbook: a practical guide to wetland care*. British Columbia Wildlife Federation and Environment Canada. Vancouver, British Columbia. 160 p.

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Government of Quebec

Wetlands are protected in the province of Quebec through habitat protection legislation. As in other provinces, the province of Quebec has additional statutes and regulations that have the potential to protect specific wetlands while achieving other objectives.

Provincial Statutes

The central statute for wetland protection is the *Act Respecting the Conservation and Development of Wildlife — Regulation respecting wildlife habitats.* Under this regulation wetland habitat for specific wildlife species on public lands are protected. Wetlands that are waterfowl gathering areas, fish habitat, muskrat habitat or salt licks are specifically protected by this regulation. The focus of the legislation is on the wetlands along the St. Lawrence River where the greatest wetland loss has occurred. The legislation does not include wetlands on private lands. There is currently an initiative to work with municipalities to protect wetlands under their jurisdiction.

Reference

Province of Quebec. 1993. *Act Respecting the Conservation and Development of Wildlife — Regulation respecting wildlife habitats. Gazette Officielle du Québec,* July 14, 1993, Vol. 125, No. 29. 8 p.

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Government of Newfoundland

Newfoundland has not, as yet, drafted a wetland policy. Wetland protection in Newfoundland is dependent on the application of existing statutes.

Provincial Statutes

Newfoundland has several statutes, such as the *Environment Act,* which have the potential to protect specific wetlands through the granting of permits, licences and approvals. Regulations under the *Wildlife Act* provide for the creation of wildlife reserves that can protect wetland areas. Any activities in these areas must be approved by the Minister. The *Water Resources Policy — Environment Act* protects specific wetlands for their hydrologic resources as well as wetlands for waterfowl habitat. Approval is required under the *Environment and Lands Act* for the development of peatlands and such development must also be registered under the *Environmental Assessment Act.*

The *Municipalities Act,* in conjunction with the Eastern Habitat Joint Venture has been used to develop wetland stewardship programs with municipalities. Stewardship agreements have been successful in protecting many wetlands around municipalities.

References

Newfoundland and Labrador Department of Environment and Lands. Undated. *Wetlands of Newfoundland — A Valuable Resource.* Brochure. St. John's, Newfoundland. 1 p.

Newfoundland Department of Natural Resources. [Date unknown.] *Water Resources Policy.* St. John's, Newfoundland.

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Canadian Sphagnum Peat Moss Association

The Canadian Sphagnum Peat Moss Association (CSPMA) represents 18 peat moss producers and marketers representing 99 percent of Canada's total production. The association was formed to promote the benefits of peat moss to horticulturists and home gardeners throughout North America.

The CSPMA adopted a *Preservation and Reclamation Policy* in 1991 to ensure peat is a sustainable resource. The policy requires that members assist and cooperate wherever possible with all recognized conservation bodies who are prepared to give constructive help towards complying to this policy. Members are urged to reduce the impact of their operations on the environment and strive for maximum land restoration for the continuing benefit of the community. They should undertake studies, prior to opening new bogs, and identify areas of greatest environmental interest and, where possible, leave these undisturbed to act as refugia when harvesting ceases. Members should also work with provincial governments to designate appropriate peat bogs as reserve or parkland for the purposes of study and recreation.

Once harvesting is complete, members should permit bogs to return to a natural wetland state through natural succession or develop a plan that would include farming the land, planting trees for reforestation, or allowing it to be used by conservation groups to develop new wildlife habitat, such as water holes for ducks and other wildlife.

The CSPMA has also developed a *Peatland Restoration Guide* in cooperation with environmental regulators on how to restore sphagnum moss growth on harvested peatland.

References

Canadian Sphagnum Peat Moss Association. 1991. *The CSPMA Preservation and Reclamation Policy.* St. Albert, Alberta. Available at: http://www.peatmoss.com. Accessed May 1998. 2 p.

Quinty, F. and L. Rochefort. 1993. *Peatland Restoration Guide.* Canadian Sphagnum Peat Moss Association. St. Albert, Alberta.

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Canadian Pulp and Paper Association

The Canadian Pulp and Paper Association (CPPA) represents forest products companies across Canada; the association's members account for nearly all the paper and pulp produced in Canada. The goal of the organization is to increase the knowledge base of the industry and raise the standards by which Canadian pulp and paper is produced.

In 1992, the CPPA released a Wetlands Policy Statement, that recognizes the importance of wetlands to the environment. When forest operations are planned, wetlands will be taken into account through integrated forest management.

The industry is committed to regulations and guidelines for wetland conservation based on sound science, and realistic, workable wetland definitions of wetlands classes. The CPPA Statement notes the industry's commitment to sustaining wetlands through integrated resource management and to maintenance of the ecological and socio-economic functions of wetlands over the long-term. The Statement notes also that CPPA companies support a coordinated, cooperative approach involving all stakeholders.

The wetland statement is scheduled to be reviewed in 1999.

Reference

Canadian Pulp and Paper Association. 1992. *A Statement by the Pulp and Paper Industry — Wetlands*. Montreal, Quebec. 2 p.

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Table 1: Strengths and limitations of federal statutes for conserving wetlands

Statutes	Focus	Strengths	Limitations	Achievements
Migratory Birds Convention Act	◆ **migratory birds** and their nests	◆ authorizes designation of Migratory Bird Sanctuaries (MBS) for nationally significant habitat	◆ does not protect habitat, except for Section 35 that prohibits – anywhere in Canada – deposit of harmful substances in waters frequented by migratory birds	◆ wetlands cover about half of 11.3 million ha of MBS area ◆ sheer fact of designation as "Sanctuary" provides some measure of protection to the area ◆ effectiveness of Section 35 in preventing harm to wetlands is not known
Canada Wildlife Act	◆ **wildlife** research, conservation and interpretation ◆ "wildlife" includes any animal, plant or other organism belonging to a wild species and also the habitat of any wild animal, plant or other organism ◆ applies to ***Canada's lands, internal waters and territorial sea***	◆ authorizes designation of National Wildlife Areas and Marine Wildlife Areas to protect nationally significant habitats, especially for migratory birds, but for all wildlife ◆ protects wildlife by prohibiting activities harmful to wildlife *and the environment* ◆ less difficult to establish, and more flexible, than National Park designation ◆ most extensive geographic coverage of all federal protected area programs	◆ clear federal jurisdiction limited to migratory birds; otherwise need cooperation of provinces (Percy 1993) ◆ potential for industrial development in protected areas still exists (World Wildlife Fund 1996)	◆ wetlands cover about 40% of the total area (287 000 ha) of National Wildlife Area ◆ establishment of the North American Wetland Conservation Council (Canada) and its secretariat
National Parks Act	◆ acquisition and management of lands to leave unimpaired for future generations ◆ under National Parks System Plan, **representative parks** in each of the terrestrial and marine regions of Canada (marine regions include ***Canada's oceans and Great Lakes)***	◆ authorizes designation of National Parks and National Marine Conservation Areas ◆ National Parks offer relatively strong legal protection, through "maintenance of ecological integrity" and "unimpaired" clauses	◆ long, onerous process to establish National Parks in legislation; establishment of National Marine Conservation Areas may be even more complicated (Attridge 1996)	◆ 1.3 million ha of wetland within National Parks
Canada Oceans Act	◆ Marine Protected Areas focus is the protection of **fishery resources** including marine mammals and their habitats; endangered species and their habitats; areas of high biodiversity or productivity; and unique habitats ◆ management of ***estuarine coastal and marine systems in waters that form part of Canada***	◆ authorizes designation of Marine Protected Areas (MPA) ◆ objective for MPAs encompasses a broad range of species and habitats ◆ federal government has *clear authority* to establish MPAs under this Act	◆ would apply only to tidal wetlands that support fisheries	◆ Act is new: limited achievements to date

Fisheries Act	◆ applies to all "**Canadian fishery waters**" (seacoast and inland fisheries) ◆ has provisions for pollution prevention and conservation and protection of fish habitat ◆ "fish" includes all parts and life stages of finfish, shellfish, crustaceans and marine mammals; "fish habitat" means those areas on which fish depend in order to carry out their life processes; "fisheries resources" means fish stocks or populations that sustain commercial, recreational or native fishing activities of benefit to Canadians	◆ prohibits the harmful alteration, disruption or destruction of fish habitat, including wetlands ◆ requires plans of projects with potential to interfere with fish or fish habitat ◆ prohibits deposit of deleterious substances in water frequented by fish	◆ federal jurisdiction limited to those aquatic habitats contributing to a fishery ◆ focus on fisheries resources, not ecosystem conservation (Percy 1993) ◆ exercise of federal power over fisheries sometimes politically controversial (Percy 1993)	◆ proportion of activity under Act that is associated with wetlands is not known
Canadian Environmental Assessment Act	◆ projects for which the **federal** government holds **decision-making** authority, whether it proposes a project, sells, leases or transfers control of land, contributes money or other financial assistance, or exercises a regulatory or "permitting" duty ◆ applies to projects ***anywhere in the world***	◆ casts a broad net over many of the potential ways that the federal government can affect wetlands: primary means of implementing the *Federal Policy on Wetland Conservation*	◆ lack of clear criteria or guidelines for determining the acceptability of projects and appropriate mitigation measures (Attridge 1996) ◆ lack of independent review: decisions often made by authority involved in the project (Attridge 1996) ◆ lack of clear, formal, funded public participation process (Attridge 1996)	◆ number of major decisions under CEAA involving wetlands is not known ◆ recent assessment under CEAA set important precedent in terms of wetland assessment and mitigation of impacts on wetland functions
Income Tax Act of Canada	◆ Ecological Gifts Program applies to **ecologically sensitive sites**, including wetlands	◆ fosters use of voluntary land donations and conservation easements in return for tax deductions against income	◆ depends on the enactment of supporting provincial easements or covenants legislation	◆ during the first two years of the program, 90 ecological gifts have been donated by private landowners to conservation organizations, representing over 10 200 ha of sensitive habitats valued at $25 million

Table 2: Provincial/Territorial statutes tha

Statutes	British Columbia	Alberta	Saskatchewan	Manitoba	Ontario	Quebec
Protected Areas	*Park Act; Ecological Resources Act; Heritage Conservation Act*	*Wilderness Areas, Ecological Reserves and Natural Areas Act; Provincial Parks Act*	*Ecological Reserves Act; Parks Act*	*Ecological Reserves Act; Provincial Parks and Lands Act*	*Ontario Heritage Act; Provincial Parks Act*	*An Act Respecting the Ecological Reserves; Parks Act*
Wildlife Management (Including Endangered Species)	*Wildlife Act* (Habitat Conservation Fund)	*Wildlife Act*	***Wildlife Habitat Protection Act***	*Wildlife Act; Endangered Species Act*	*Endangered Species Act*	*Act Respecting Threatened or Vulnerable Species;* ***Act Respecting th Conservation and Development of Wildlife****
Water Management	***Water Act****	*Water Resources Act;* ***Water Act**** **(new)**		*Water Resources Administration Act*	***Ontario Water Resources Act****; *Lakes and Rivers Improvement Act*	
Land Use/ Land Management Planning	*Municipal Act; Land Act; Environmental Assessment Act*	Municipal Planning Act (pending); ***Public Lands Act****	*Planning and Development Act; Provincial Land Act*	*Planning Act*	*Municipal Act; Ministry of Government Services Act;* ***Planning Act****; ***Public Lands Act****	
Environmental Protection (anti-pollution)	*Waste Management Act*	*Environmental Protection and Enhancement Act*	*Environmental Management and Protection Act*	*Environment Act*	*Environmental Protection Act*	
Environmental Assessment	*Environmental Assessment Act*	*Environmental Protection and Enhancement Act*	*Environmental Assessment Act*	*Environment Act*	*Environmental Assessment Act*	*Environmental Quality Act*
Sustainable Use of Resources (Agriculture, Forestry, Fisheries)	***Forest Practices Code of B.C. Act****	*Forests Act*	*Fisheries Act; Natural Resources Act*	*Forest Act*	Crown Forest Sustainability Act (pending); Fish and Wildlife Act (pending)	*Forest Act; Plant Protection Act*
Private Land Conservation	*Land Title Act*	*Environmental Protection and Enhancement Act*	***Saskatchewan Conservation Easement Act****	*Heritage Resources Act;* ***Conservation Agreements Act**** (pending)	***Conservation Land Act****	

* Statutes with asterisks and bold type are judged most valuable for wetland conservation by local wetland managers.

contribute to wetland conservation*

New Brunswick	Nova Scotia	Prince Edward Island	Newfoundland	Yukon	Northwest Territories
Ecological Reserves Act; Parks Act	*Provincial Parks Act; Special Places Protection Act*	***Natural Areas Protection Act***	*Provincial Parks Act; Wilderness and Ecological Reserves Act*	*Parks Act* **(*Land Claims*)**	*Territorial Parks Act* **(*Land Claims*)**
Endangered Species Act	*Wildlife Act*	***Wildlife Conservation Act*** (Heritage Marshes)	***Wildlife Act***	*Wildlife Act*	*Wildlife Act*
Clean Water Act Water Course Alteration Regulation)	*Water Act*				
Community Planning Act; Crown Lands and Forests Act	*Planning Act; Crown Lands Act*	***Planning Act*** (Coastal Areas Regulation); *Lands Protection Act*	***Municipalities Act***; *Crown Lands Act*		*Planning Act*
Clean Water Act	*Environment Act*	*Environmental Protection Act*	*Waters Protection Act*	*Environment Act*	
Clean Environment Act (Environmental Impact Assessment Regulation)	***Environment Act*** (Wetlands Directive)	*Environmental Protection Act*	***Department of Environment and Lands Act*** (Water Resources Policy); *Environmental Assessment Act*		
Crown Lands and Forests Act		*Fish and Game Protection Act; Forest Management Act; Wildlife Conservation Act*	*Forestry Act*	*Forest Protection Act*	*Forest Management Act*
	Conservation Easements Act	***Natural Areas Protection Act***			